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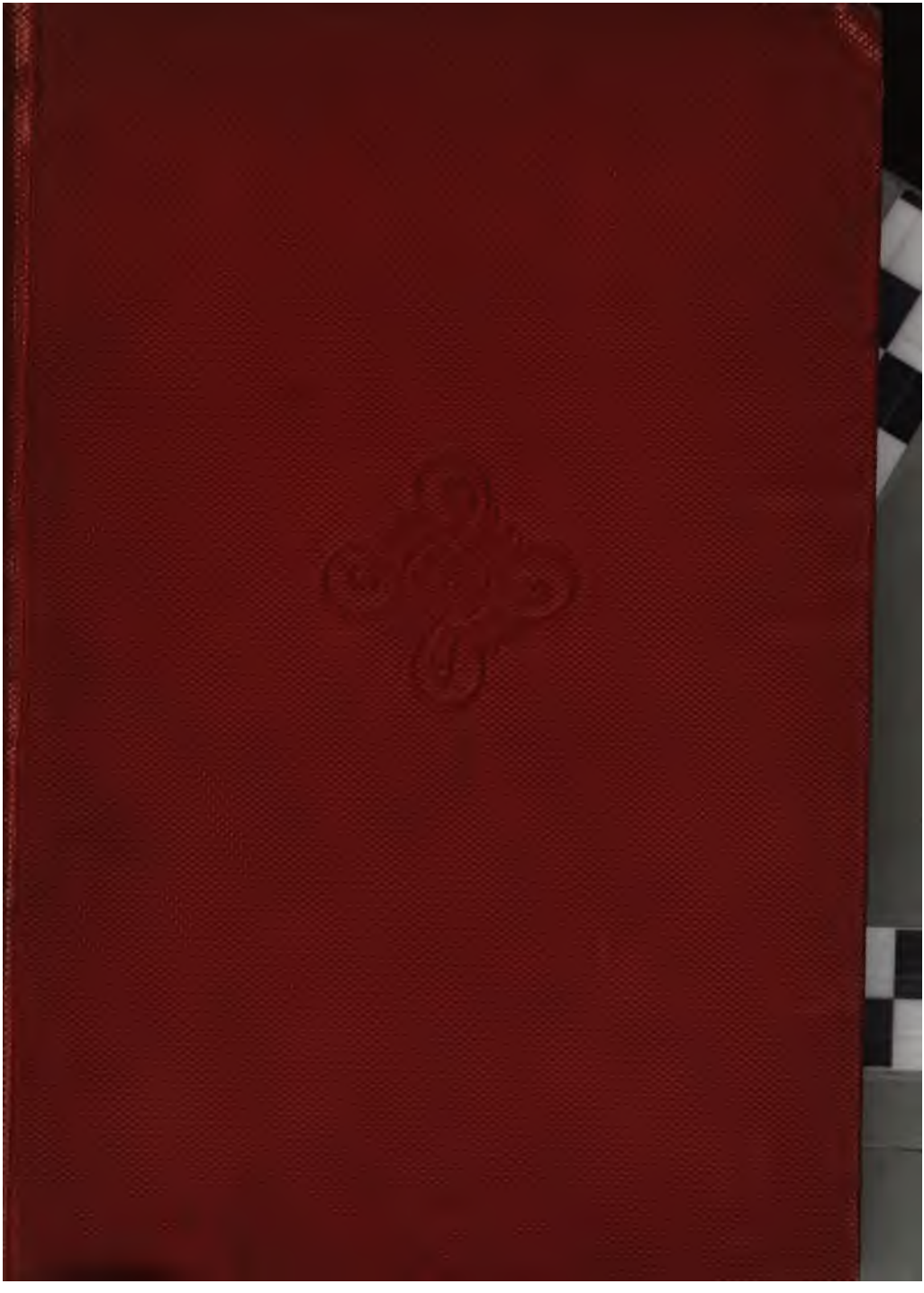

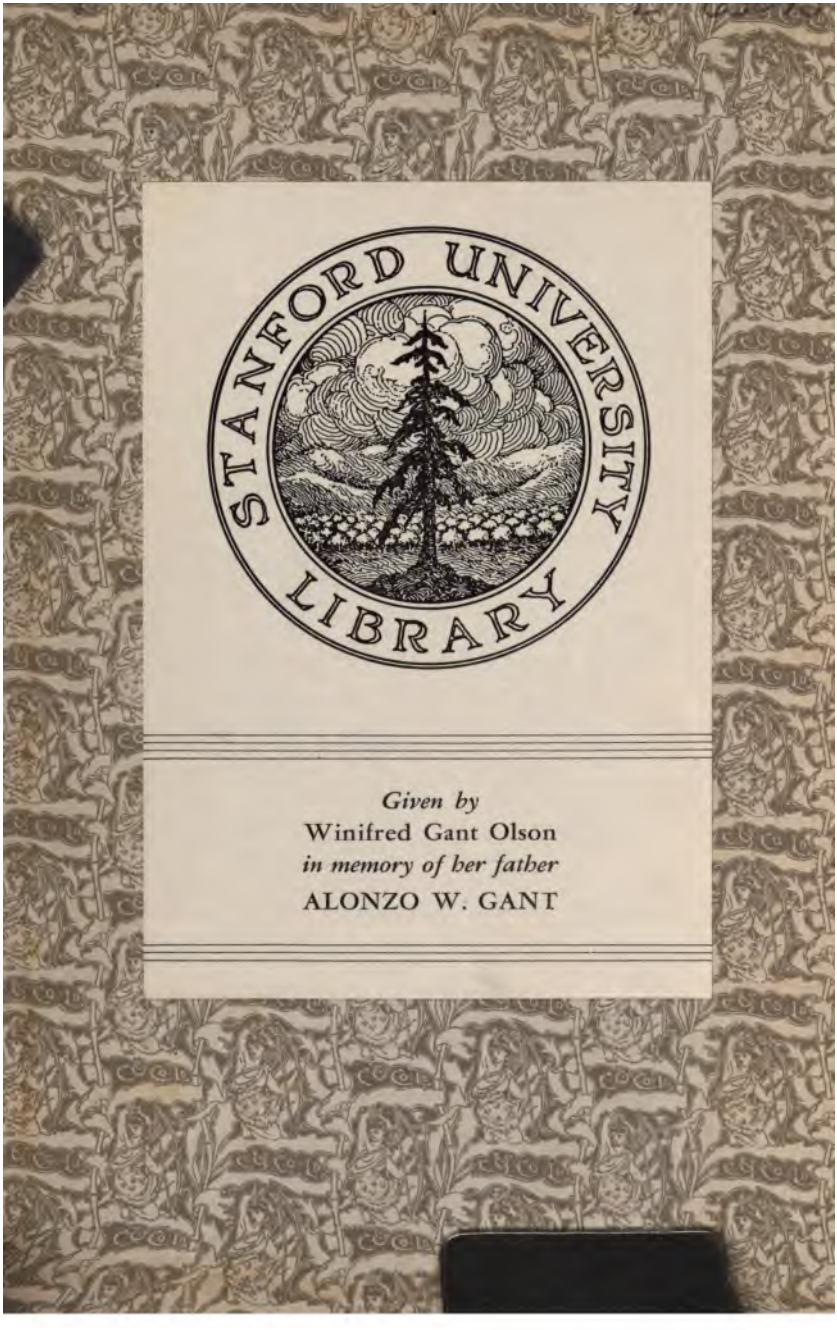

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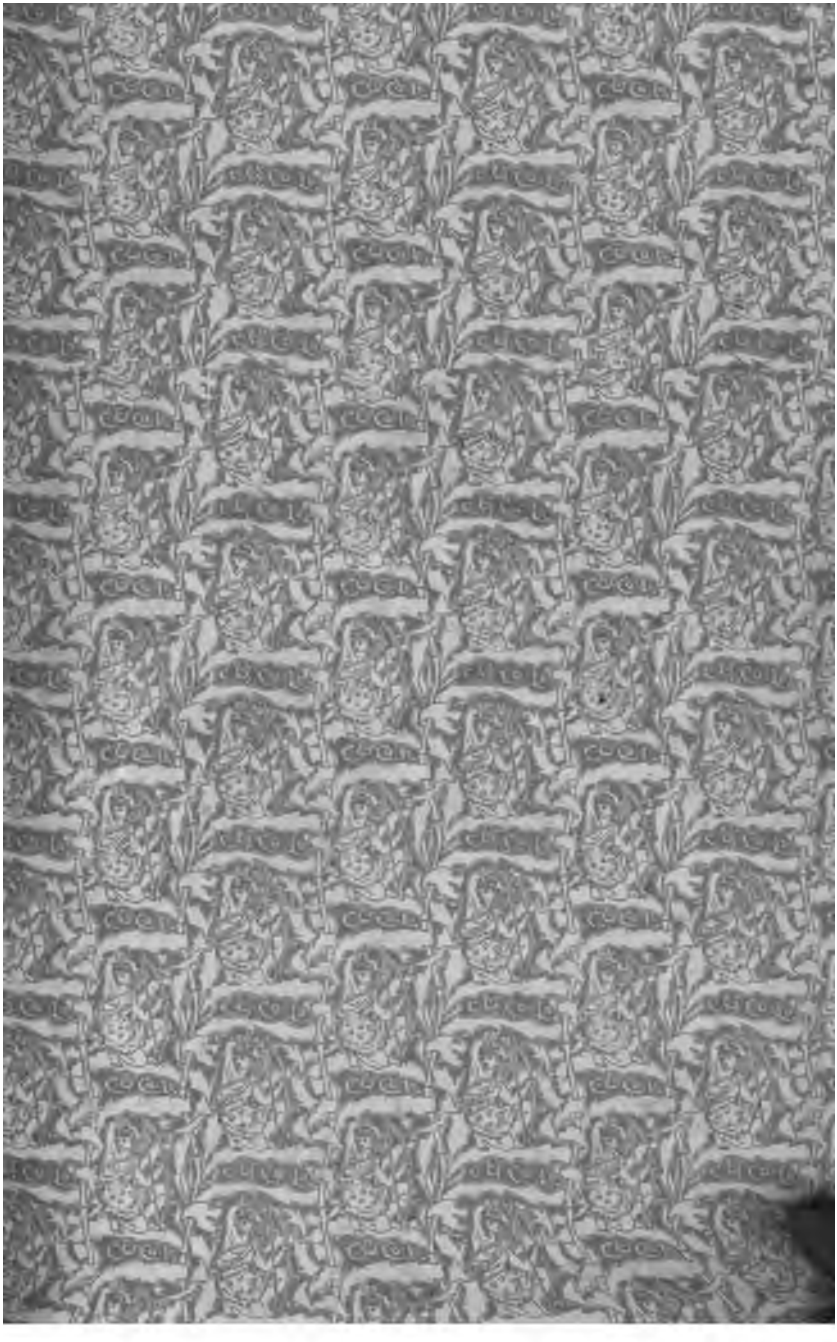

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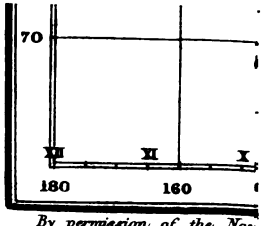
Colonel Sherwin Cox

from

the Authors

with Compts & kind regards

Oct Nov 1901



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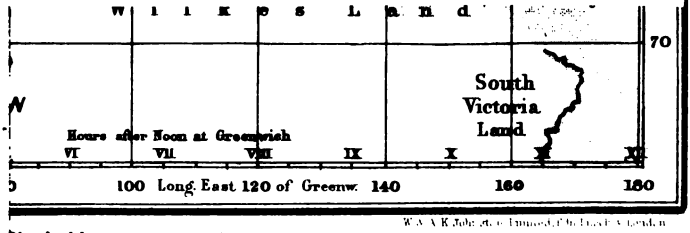

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THE

MILITARY FORCES OF THE CROWN

THEIR ORGANISATION AND EQUIPMENT

BY

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INTRODUCTION.

"A POWER to which for purposes of foreign conquest and subjugation Rome in the height of her glory is not to be compared—a Power which has dotted over the surface of the whole globe with her possessions and her military posts, whose morning drum-beat, following the sun and keeping company with the hours, circles the earth with one continuous and unbroken strain of the martial airs of England."

Thus spoke Mr. Webster, the great American orator, on May 7th, 1834—three years before the accession of her late gracious Majesty. Had he lived through her reign his eloquence would have found themes still more inspiriting in the enlargement of the sphere of British influence, in the success of British expeditions, in the numberless camps where our outposts are awakened by the morning bugle, in the exploration and annexation of the very darkest parts of Africa, in the revival of prosperity by the banks of the Nile, and in the unexampled development of Imperial greatness in Australasia and Canada.

The responsibilities and the glories as well as the wealth of the Imperial Isles, have been

enormously enhanced. Our troops occupy 142 different stations in every part of the world (exclusive of South Africa), and their efforts are supported not only by men of our own blood from Esquimault to Halifax, and in the vast islands of the Southern Seas, but also by the splendid fighting races of Northern India, and by the best warriors of Western Africa and the Soudan. Considering that our native soldiers and sailors are the backbone of this mighty Empire, and that as representing the ruling 40,000,000 people, they hold 360,000,000 others in contented subjection, their number is remarkably small. The expense of maintaining our Empire, whether by sea or land, is comparatively moderate, and the cost, whether in enlargement of our National Debt or in yearly taxation, has decreased to a remarkable extent compared with the increase in our resources since the date of Webster's eulogy. One farthing a head daily of taxation now produces £14,000,000 a year.

By their fine services our fighting men deserve the heartiest gratitude on the part of our own folk; and it is satisfactory to observe from recent writings by even Continental critics, that in the beginning of the reign of Edward VII., as in the reign of George III., the British Army gives place to none for courage and endurance in the opinion of the world.

The necessity for perfect efficiency in our Navy and our Army, and a state of constant

readiness on the part of both to prevent surprise, is infinitely greater now than it was at the accession of Queen Victoria. A glance at the map will show that our frontiers are no longer contiguous merely with savage, or inert and decaying, or half-civilised communities. For boundaries our Empire has territories governed by Russia, France, and Germany, to say nothing of Persia, China, Siam, and Abyssinia. The numbers and organisation of our soldiers must be equal to a struggle with the best led, the best equipped, the best organised, and the bravest troops of the world, supported by all the wealth and intelligence of the principal European States. And the battles may be fought thousands of miles from the base in our island home.

In 1834 our people could manage to live, if necessary, for a considerable period on the products of our own soil. Our teeming population is now sustained mainly by the produce of other lands.

We cannot exist as a prosperous community if our soldiers are driven out of our distant dominions or if our Fleet even for a short period loses that command of the sea which is "an epitome of monarchy," on which the wealth of both Indies has depended since the days of Queen Elizabeth, and which is the principal dowry of our United Kingdom.

The South African War ought to convince our people that Empire can only be preserved by

constant effort and never-ceasing vigilance. It ought also to induce our politicians to shake off their indifference to the efficiency of our military forces, and to draw up schemes of reorganisation which would be more than mere temporary expedients. We must either pay our regular Army better, or enforce old constitutional and not very exacting methods of obligatory service far more suited to our national requirements than any Continental system of conscription.

Another most important result of the recent war has been the way in which Colonial and Indian troops have fought beside ours with great distinction.

It must be remembered that there is no analogy between the requirements and the transport to the front of our Army, and of Continental armies. Moreover, that the ordinary and the extraordinary duties of our Army are quite dissimilar from those of Continental armies; and that, so long as we do not adopt the policy of conscription in any form, the power of our Army to discharge any duty efficiently depends upon considerations quite distinct from those on which depends the strength of Continental armies. Another radical distinction between a Continental and an Insular Power is that the troops of the former proceed forthwith by rail or road, or both, to the theatre of operations; whereas those of the latter must first go by road or rail to the sea-coast, then detrain and embark, and,

after a sea voyage, disembark and entrain again for, or march by road to, the front. The Germans will fight in the Polish Quadrilateral, in the Vosges, or in Champagne. We must fight on the slopes of the Himalayas or the Hindu Kush, by the banks of the St. Lawrence, the Mekong, the Limpopo, the Nile, or the Niger.

The Russians can get to China or the Afghan frontier in comfortable trains; but British soldiers may be tossed by tempests over a quarter of the earth's circumference before entering upon the preliminary stages of a campaign.

Nothing can better illustrate the essential difference between our Army and the German forces than the fact that Bronsart von Schellendorff's official text-book, an epitome of the best work of the "brain of the army," dismisses in about six pages the subject of steamboats and transport of troops by sea.

Bronsart, after stating that German railways conveyed to the frontier up to August 9th 16,000 officers, 440,000 men, 135,000 horses, and 14,000 guns and carriages, goes on to say: "We may reasonably assume, then, that in future our performances under this head will not be behind these." German railways can now convey to the front 200,000 men a day. The most captious admiral who ever attended the meetings of the United Service Institute would admit that the English would decidedly require an "Army as

well as a Navy" if we are to expect to approach this stupendous performance in the immediate future!

All our people should hearken to the "oracle of time," which continued immunity from invasion has caused our rulers to ignore too long, "that no nation can expect to be great that does not make the profession of arms its principal honour, study, and occupation." Nor should any State blindly imitate the military institutions of a neighbour, however successful. Davidoff warned the Russians against a slavish copying of Napoleon's methods, and against forgetting that they were an Asiatic as well as a European Power. Hence their march from Moscow to Paris. The great Russian strategist says: "The military organisation of each country must be based on the habits, customs, manners, natural tastes, and inherited traditions of its own people; Nature is invincible. Paper schemes and arithmetical calculations will deceive generals who do not know the feelings of their men. Imitation is productive of more military tailors than tacticians."

It must also be remembered, in the words of Nioz, the great French writer on strategic geography, that the modern history of England is largely explained by the fact that it is a vast isolated block of iron and coal in the midst of the ocean, and that its excessive population must have outlets for the products of its industry, or perish.

Moreover, the insular position of Great Britain and the manufacturing, maritime, and commercial activity of its people have contributed to give them distinctive and peculiar habits of mind and body—obstinacy, energy, activity, bluntness, a rather proud and sensitive individuality, and a somewhat narrow conservatism in tastes and views. Statesmen and Army reformers must thoroughly appreciate the splendid qualities as well as the many drawbacks of our national character, and shape their policy accordingly; otherwise their schemes, however admirable in theory, will assuredly fail in practice.

The large number of tables and mere lists and enumerations in this book is unavoidable. It would be a much pleasanter task to write in general terms and to give pictorial representations of the daily life and uniforms of our Army. But the principal object of the present work is to assist officers of all branches of the service, and students at the various military colleges, who must pass examinations in its subjects, and to serve as a manual for reference to the public at large.

We are, therefore, obliged to avoid many topics connected with our theme which, however interesting, could not be included in a professional educational course on "Organisation and Equipment." Similar reasons, as well as considerations of bulk, compel us to resist,

in this volume, the temptation to digress into the spheres of military history and tactics.

We have to thank the Navy League and Messrs. Johnson & Co. for permission to use their map of the world.

T. MILLER MAGUIRE,

10, Earl's Court Square.

September 28, 1901.

THE MILITARY FORCES OF THE CROWN:

THEIR ORGANISATION AND EQUIPMENT.

CHAPTER I.

IMPERIAL DEFENCE AND COMMAND OF THE SEA.

ALTHOUGH our very existence depends upon our Navy, and the principles of naval warfare are taught at the institutions in Germany, France, and Italy corresponding to our Staff College, naval strategy so far forms no part of the educational course of any of our officers. It is to be hoped that this will be amended before long. To form any appreciation of a judicious combination of the Navy, Home Army, and Colonial forces in Imperial defence, the first requisite is a thorough knowledge of strategic geography, *i.e.* not merely to know, but to understand the value of the different lines of communication from Great Britain to a threatened point, and then to know the naval strategic points on these various lines and how to make use of them.

Taking Calcutta as an example, we find we have three maritime lines of communication

thither, the first and shortest *via* the Mediterranean, Suez Canal, and Red Sea. On this line we have naval supporting points at Gibraltar, Malta, Cyprus, Egypt, Aden, Bombay, and Colombo.

The second line *via* the Cape of Good Hope. On this line we have supporting points at Bathurst, Free Town, Ascension, St. Helena, Simon's Bay, Mauritius, Seychelles, and Colombo.

The third line *via* Canada. On this line we have St. John's, Halifax, Esquimault, Labuan, Hong Kong, Singapore, and Penang.

Taking, therefore, the concentration of a considerable force at Calcutta as an example, a most interesting problem at once presents itself for solution. To solve it effectually one should know the strength of our own and of the probable hostile fleet at or near the various stations located on the different lines of communication. In the event of part of the journey being done overland, one must know what amount of ships suitable for transports would be likely to be obtainable in the neighbouring commercial ports at which stores of coal are kept, what provisions for the troops while on board could be obtained from naval victualling yards and other sources. No doubt there would be plenty of able advisers among the naval officers, but at the same time the military commander might not think it desirable to let others know too much about his actual plan of campaign. Knowing, however, something of the principles of naval warfare himself, he could form a fair

judgment as to whether it were feasible to go on with his original plan or whether he should modify it on account of the naval situation. The strength of the garrisons of the different fortresses on the lines of route should be known, and the nature of their defences and armaments; also what kind of anchorage they possess in case it had to be considered whether, under certain circumstances, the transports should leave the Navy a freer hand by being run in under protection of the fortress guns.

Of course, the military branch of the public service would not intrude into the special naval province. But combined operations are at times essential, and, as one branch of the national services is the complement of the other, each should have a general acquaintance with the principles upon which the effective action of the other depends. This knowledge would smooth the path of success for both, and the unsatisfactory state of affairs that prevailed about Carthagena, York Town, and Walcheren would be avoided.

Above all things, however, for Imperial defence, command of the sea is the great necessity. It means to an Insular Power that it can remain on the defensive as long as it chooses, assuming the offensive whenever and wherever it thinks desirable. It can select its own time and place for carrying on operations, whether naval or military. When conducting military operations at a distance, having selected a base on the coast, that base has to be made

secure on the land side only. History shows that all the great empires of former times owed their greatness to naval supremacy, and directly their naval supremacy declined the empire fell into decay. Coming to comparatively recent times, we have only to remember the vast colonial possessions belonging to Spain and Portugal in the fifteenth and sixteenth centuries, when they were the great European naval Powers.

Our Fleet should be strong enough to act defensively and offensively—defensively, to protect our coast line from a hostile landing, and to protect our mercantile fleet bringing in our food supply; offensively, to attack the enemy's fleet in the open seas, or to blockade it in harbours and thus prevent it putting to sea at all. That some of our smaller colonies might suffer temporarily is quite possible; but, if we were successful in the main war, annexation would be out of the question, whatever formalities might have been gone through, and if a contribution of money had been levied on them the enemy would have to repay it. So long as we hold command of the sea no dangerous attack could be made on Gibraltar, Malta, and the other strategical fortresses of the Empire—nor could they run short of supplies. Our recent South African experiences bring home to us the value of this command of the sea and of a large mercantile marine. During the years 1795-97 some 1,500 of our merchant vessels were captured by the French

off the Cape of Good Hope; this loss ceased altogether when we took Mauritius from them in 1810, and from this naval base obtained command of the sea in that locality.

The following tables will give an idea of the carrying powers of our mercantile marine, and also the rates at which troops, horses, and supplies can be brought from one part of the Empire to another.

In the course of eighteen months 300,000 troops were sent from home to South Africa, a distance of 6,000 miles, with no loss of life and with very few accidents; 253,708 horses and mules were also sent from home and foreign countries during the same time.

This table shows the carrying capacities of some of the ships in our mercantile marine hired as transports or freight ships, and the time taken on the voyage:—

Name of Ship.	*Date of Departure.* Southampton.	*Date of Arrival.* Cape Town.	*Troops Conveyed.* Offs.	W.O.	N.C.O's. and Men.	*Horses.*	*Vehicles, including Guns.*
Kildonan Castle	3rd Jan.	20th Jan.	83	6	2,607	6	
Bavarian	13th ,,	3rd Feb.	61	3	2,142	6	14
Cymric	1st ,,	21st Jan.	49	3	1,547	431	62
Assaye	4th ,,	23rd ,,	60	2	1,973	6	12
Cestrian	21st Dec.	10th ,,	28	2	764	479	38
Victorian	13th ,,	1st ,,	29	1	741	476	31
Atlantian	6th ,,	29th ,,	20	2	479	376	74

It will be observed that the carrying capacity of a ship, as regards the number of troops, depends altogether on the arm of the Service the troops belong to—*i.e.* whether Infantry, Cavalry with their horses, or Artillery with guns and horses.

Table showing the time taken by transports

carrying troops from the Mediterranean to South Africa:—

Ship.	*Troops.*	*Embarkation.*	*Disembarkation.*
Goth ...	Infantry ...	Gibraltar, 23rd Aug.	Natal, 20th Sept.
Sumatra	,, ...	Malta, 27th Sept. ...	Cape Tn., 21st Oct.
Jelunga	R. E. & Inf.	Crete, 2nd Oct.	Natal, 26th Oct.

Conveyance of Colonial Contingents to the Cape:—

Colony.	*Troops.*	*Ship.*	*Embarkation.*	*Disembarkatn. (Cape Town).*
Canada	Infantry	Sardinian	Quebec, 30th Oct. ...	30th Nov.
New Zealand	Mtd. Inf.	Waiwera	Wellington, 21st Oct.	23rd ,,
N. S. Wales	Lancers	Kent	Sydney, 28th Oct. ...	1st Dec.
Do.	Various	Aberdeen	,, 3rd Nov. ...	7th ,,
Victoria	Inf. and Mtd. Inf.			
S. Australia	Infantry	Medic ...	Albany, 5th Nov. ...	26th Nov.
W. Australia	,,			
Tasmania ...	,,			
Queensland	Mtd. Inf.	Cornwall	Brisbane, 1st Nov....	14th Dec.

Troops, horses, cobs, and mules from India, Mauritius, Rangoon, and other localities:—

Ship.	*Troops.*	*Date of Embarkation.*	*Date of Arrival (Natal).*
Secundra	R.F.A. ...	Bombay, 17th Sept....	4th Oct.
Lalpoora	,, ...	,, 18th ,, ...	2nd ,,
Vadala	Cavalry ...	,, 21st ,, ...	7th ,,
City of London ...	Infantry...	,, ,, ,, ...	5th ,,
Purnea	,, ...	Calcutta, 18th ,, ...	5th ,,
Nurani	,, ...	,, 20th ,, ...	9th ,,
Nerbudda'.....	Mules	,, 27th ,, ...	18th ,,
Upada	Horses ...	Bombay, 4th Oct. ...	20th ,,
H.M.S. Powerful	Infantry...	Mauritius, 6th Oct....	(*Cape Town*). 13th Oct.
Palamcotta.....	Mtd.Inf....	Rangoon, 24th Jan....	(*Natal*). 10th Feb.

Horses and cobs were brought from Australia and Argentina:—

Ship.	*No. of Animals.*	*Departure.*	*Arrival (Cape Town).*
Beacon Grange	685	Buenos Ayres, 14th Nov.	30th Nov.
Induna	714	,, ,, 30th ,,	18th Dec.
Prah	555	,, ,, 20th Dec.	7th Jan.
Langton Grange	636	New South Wales, 14th Nov.	19th Dec.
Twickenham	140	King George's Sound, 18th Dec.	6th Jan.

And mules from Gibraltar and other places:—

Mount Royal	2,247	Gibraltar, 10th Nov.	1st Dec.
Hyades	1,000	Naples, 11th Oct.	6th Nov.
Manchester City	2,349	New Orleans, 23rd Nov.	26th Dec.
Carinthia	1,358	,, ,, 21st Jan.	16th Feb.

The average price paid for a transport capable of taking 1,250 infantry soldiers was £5,000 a month. The mail passage from Southampton to the Cape is sixteen days. The average time taken by the good transports was twenty to twenty-five days. It must be remembered that had we not had "command of the sea" in the fullest sense this transport of troops and supplies from home and the Colonies to South Africa could not have been carried out with rapidity and regularity. If we had had to guard our transports from home, from India, Canada, Australia, and New Zealand against the attack of a hostile fleet, it would have meant a very different task.

And this should be remembered when considering the problem of Imperial Defence. Because the Navy had no share "at sea" in the present war, it must not be forgotten that during the very next war we are engaged in the whole burden may fall on the Navy. As

long as our fleets can keep our maritime lines of communication open the Empire is safe from invasion on a large scale, except in Canada from the United States of America, in India from Central Asia, and at Gibraltar from the small isthmus that connects it with Spain. To India, as before stated, we have three main lines of communication by sea. To Canada we could send reinforcements from home to Halifax, and from India and Australia to Esquimault; and on all these lines we have naval supporting points.

One point intimately connected with command of the sea is the question of our food supply, should we be engaged in war with a European Power. Some eminent politicians and military men hold the opinion that, under the protection of our Navy, our food supply would be maintained even were we at war with a Power possessing a considerable navy. Many others hold the opposite view, and contend that, even if the supply of cattle and breadstuffs still continued to arrive, the prices of these articles would be greatly raised.

We have seen the price of bread suddenly rise to nearly double its ordinary value in recent times, and during the 1870-71 war the price of meat in Jersey rose to about three times its usual value. Keeping points like this in view, it is evident that, even should there be no absolute scarcity of the ordinary commodities of everyday life, still their price would be so much increased that it would fall heavily on the working classes—many of whom

would be nearly or wholly out of employment—and with hunger follow discontent and unrest. It would seem, therefore, to be a safer plan to arrange that the Government should have a supply of food on hand sufficient to control prices to a certain extent. When the producer had raised his price, the shipowners the freight, the underwriters the insurance (against war risks), by the time the wheat and other food supplies reached the home merchant their cost would have been so much increased that he would have to retail them at very much higher prices than in ordinary times. Assuming, therefore, that those who advocate having four to six months' supply of wheat for the country in hand are right, the next question is, How is the supply to be kept? Most people say in granaries, but granaries have serious drawbacks. First of all, they are costly to build and keep in repair; then, unless the wheat is in dry, good condition when put away, the whole stock might be spoilt. Caretakers must be kept and well paid to look after the granaries, or the wheat might disappear; and there must be considerable loss from insects, rats, and other causes. Moreover, as the wheat would have to be periodically sold and replaced, there might be losses on these transactions. So although granaries are a very old-established method of keeping supplies of corn in hand, they entail considerable expense.*

* This whole question was fully discussed at Captain Stewart Murray's lecture at the United Service Institute. (See the "Journal," June, 1901.)

During the South African War we have found that one of our methods of preparing in peace time for war has turned out a good one, and that was the registering of horses for a ten shillings fee. This system produced some of the best horses we have had. Having, therefore, found a good system, it seems desirable to adhere to its principles instead of trying others. If landowners and farmers registered their horses for ten shillings and brought suitable animals when called upon to do so, why not apply the same principles to corn stacks? It is quite an easy matter for anyone with practical experience to estimate very approximately how many sacks of corn per acre a field will thresh out. So, having the crop valued before being cut, the owner could be paid so much per "estimated" quarter to keep his stack registered for one year. No further expense or trouble would fall upon the Government; the owner should be bound by his registering agreement to insure against fire, and as the corn, like the horse, would still be his own property, it would be to his interest to see that the rick was kept properly thatched, and that rats and mice were kept out as much as possible. This plan would also have the advantage of helping farmers, who would doubtless soon increase their acreage of wheat, besides entailing far less outlay, risk, and trouble than granaries. In their present impecunious state farmers might find it difficult at first to keep their corn for a year, but means would soon

be found to enable them to do so, and as wheat improves by being kept a certain time in stack the farmer would be no loser that way. It must also be remembered that the straw would be a very useful addition to horses' rations when the importation of hay would probably have ceased owing to the rise in freights.

But whether the supply of food be kept in granaries or in "registered corn ricks," the amount would be limited, and fresh supplies would have to be obtained from outside. Fortunately, the many railways by which the country is now traversed would help us, by enabling our food-carrying ships to make for any of our northern ports, and not be obliged, as in the time of the old French war at the beginning of the last century, to have to make for those in, or in the vicinity of, the Channel.

In any proper scheme of secondary education a selection of the immortal "Essays of Lord Bacon," the wisest of the British race, would have a leading place. One of them, on "The True Greatness of Kingdoms and Estates," is a summary of military lore as applicable to all ages, and his remarks on "the command of the sea" are still texts for experts like the American Captain Mahan, one of the ablest and most eloquent authorities on our imperial development. Within twenty-five years of the defeat of the Spanish Armada Lord Bacon wrote as follows:—

"To be master of the sea is an abridgment of a monarchy. Cicero, writing to Atticus of

Pompey's preparation against Cæsar, saith, 'Consilium Pompeii plane Themistocleum est; putat enim, qui mari potiri, sum rerum potiri'; and without doubt Pompey had tired out Cæsar, if upon vain confidence he had not left that way. We see the effects of battles by sea: the battle of Actium decided the empire of the world; the battle of Lepanto arrested the greatness of the Turk. There be many examples where sea fights have been final to the war; but this is when princes, or states, have set up their rest upon the battles; but this much is certain, that he that commands the sea is at great liberty, and may take as much and as little of the war as he will; whereas those that be strongest by land are many times, nevertheless, in great straits. Surely, at this day with us of Europe, the vantage of strength at sea (which is one of the principal dowries of this kingdom of Great Britain) is great; both because most of the kingdoms of Europe are not merely inland, but girt with the sea most part of their compass, and because the wealth of both Indies seems, in great part, but an accessory to the command of the seas."

One of the ablest treatises on sea power ever written was composed by Sir Walter Raleigh, "Discourse of the First Invention of Ships and the Several Parts thereof." He entered into an elaborate inquiry into the naval history and resources of all contemporary states, such as the Venetian, the Genoese, the Spanish, French, and the new republic of the

United Provinces of the Netherlands, and he gave for the time wise counsel, full of caution and encouragement to his countrymen, proving that they could easily, if they pleased, supersede all other nations in command of the world's commerce. "The forces of princes by sea are marks of the greatness of an estate; whosoever commands the sea, commands the trade; whosoever commands the trade of the world, commands the riches of the world, and consequently the world itself."

The manner in which the British Isles were protected by our fleets, which were cruising about hundreds of miles from our shores, cannot be better described than in the words of one of the best teachers of naval strategy who ever lived—Captain Mahan, of the United States navy:—

"That period of waiting from May, 1803, to August, 1805, when the tangled net of naval and military movements began to unravel, was a striking and wonderful pause in the world's history. On the heights above Boulogne, and along the narrow strip of beach from Etaples to Vimereux, were encamped 130,000 of the most brilliant soldiery of all time, the soldiers who had fought in Germany, Italy, and Egypt: soldiers who were yet to win from Austria Ulm and Austerlitz, and from Prussia Auerstadt and Jena, to hold their own, though barely, at Eylau, against the army of Russia, and to overthrow it also a few months later on the bloody field of Friedland. Growing daily more

vigorous in the bracing sea air and the hardy life laid out for them, they could on fine days, as they practised the various manœuvres which were to perfect the vast host in embarking and disembarking with order and rapidity, see the white cliffs fringing the only country that to the last defied their arms. Far away, Cornwallis off Brest, Collingwood off Rochefort, Pellew off Ferrol, were battling the wild gales of the Bay of Biscay in that tremendous and sustained vigilance which reached its utmost tension in the years preceding Trafalgar, concerning which Collingwood wrote that admirals need to be made of iron, but which was forced upon them by the unquestionable and imminent danger of the country. Farther distant still, severed apparently from all connection with the busy scene at Boulogne, Nelson before Toulon was wearing away the last two years of his glorious but suffering life, fighting the fierce north-westers of the Gulf of Lyons, and questioning, questioning continually with feverish anxiety, whether Napoleon's object was Egypt again or Great Britain really. They were dull, weary, eventless months, those months of watching and waiting of the big ships before the French arsenals. Purposeless they surely seemed to many, but they saved England. The world has never seen a more impressive demonstration of the influence of sea power upon its history. Those far-distant storm-beaten ships, upon which the Grand Army never looked, stood between it and the dominion of the world. Holding the

interior positions, as they did, before—and therefore between—the chief dockyards and detachments of the French navy, the latter could unite only by a concurrence of successful evasions, of which the failure of any one nullified the result. Linked together as the various British fleets were by chains of smaller vessels, chance alone could secure Bonaparte's great combination, which depended upon the covert concentration of several detachments upon a point practically within the enemy's lines. Thus, while bodily present before Brest, Rochefort, and Toulon, strategically the British squadrons lay in the Straits of Dover, barring the way against the army of invasion."

These stirring sentences ought to be known to every man in our Empire. The officer who does not understand the part played by our Navy against France cannot understand the military career of Napoleon.

CHAPTER II.

THE GROWTH OF THE ARMY.

ALTHOUGH a few regiments existed in the time of the Stuarts as "guards and garrisons," and there was a great accession of strength in the time of James II., the standing Army really dates from after the accession of William III. Yet it was not until 1792 that barracks were built

in England, although in Ireland they had been established earlier.

Until 1783 a regiment was recruited, paid, and clothed by the colonel, who received a lump sum from the Crown. The allowance for clothing went to the "stock purse," and after the settlement of the year's accounts the balance was divided among the captains of companies.

The strength of the Army has fluctuated greatly.

In 1711 (Marlborough's campaigns) the total strength of the Army amounted to 201,000, but these numbers were largely composed of foreign troops. After the Treaty of Utrecht, in 1713, the Army was greatly reduced.

In 1747 the strength was 71,000. The Austrian War of Succession, in which were fought the battles of Dettingen and Fontenoy, ended in 1748, and the Army was reduced to 18,000.

In 1751 regiments were numbered and took county titles; up to this period they had been known by the names of their colonels.

During the Seven Years' War—1756-63—the strength of the Army was raised to 104,000.

In 1758 ten new regiments were raised, and numbered from 61 to 70.

In 1759 the battle of Quebec was fought; and in 1783, at the close of the American War of Independence, the strength of the Army was reduced to 17,000. In 1792 the numbers were increased to 57,000; and in 1793 war was declared by the French Republic.

In 1803, the year of Napoleon's camp at Boulogne, the Army (including the embodied Militia) was 150,000 strong.

By 1807 the numbers had been still further increased, and were now—Army 179,000, and Militia 78,000. In 1808 the Peninsular War began; and in 1809, the year of the battles of Corunna and Talavera, the total population of England and Wales being at that time 10,000,000 (by the Census of 1901 it is 32,526,075), the total strength of the British forces, including seamen and marines, was 821,650, composed as follows:—

Regulars and general Militia ...	285,398
Local Militia...	198,534
Artillery and Engineers	14,261
Volunteers	189,406
Marines	31,400
Hon. East India Company's European troops...	4,051
	723,050
Seamen	98,600
Total ...	821,650

By the Acts then in force the numbers available for home defence were:—

Navy and Marines	150,000
Regulars and general Militia ...	350,000
Volunteers	180,000
Local Militia	300,000
Trained men	400,000
Total ...	1,380,000

In addition to these forces, the men available as a reserve under the Defence Act amounted to 2,000,000. Therefore when our population was less than one-third of what it is now we had available for military service more than three and a quarter millions of men. The armies of other nations were at that period nothing like the size that they now are.

Sir R. Giffen recently demonstrated that financing a large army would now be a very simple matter for our Government, having regard to our present resources in wealth and population and national debt as compared with 1815.

In 1814 the regular Army was 236,500 strong, but we were employing 32,216 foreign troops.

In 1816, after the battle of Waterloo, great reductions were carried out in the Army and also in the auxiliary forces.

In the year 1821 the regular Army was 101,031 strong, and was distributed as follows:—

At home or on passage home ...	50,192
In Colonies	31,572
India (exclusive of Company's troops)	19,267
Total ...	101,031

During the years 1839-42, being the time of the first Afghan War, 4,000 more men were added to the strength of the Army, and during the Scinde War in 1843 7,000 more men. During the years 1845-9, the period of the first and

second Sikh Wars, 14,000 more men were added, but no change was made in the number of regiments. By 1851 the Army was 15,000 less than in 1848.

By 1854, before the Crimean War began, our military strength was as follows:—

At home or on passage home ...	71,081
In Colonies	39,754
India (exclusive of East India Company's troops)	29,208
Total ...	140,043

By 1856 the number had risen to 275,000, including 20,000 foreign troops. This was the last occasion upon which we employed foreign troops.

During the Indian Mutiny in 1858 second battalions were added to the first twenty-five regiments, and the 100th (Royal Canadian) Regiment was raised.

As our regular Army has long been voluntarily enlisted, the full establishment is rarely, if ever, attained. In 1802 the numbers wanting to complete the establishment were 42,000; in 1808, 22,000; and in 1813, 25,000. The following tables give the establishment of the various component parts of our military forces, and also their actual numbers by recent returns. It is a matter of the utmost regret to all competent authorities that many of the officers and men of our Army at present cannot pretend to represent the best brain power and physical development of the manhood of our people.

NUMBER OF OFFICERS AND MEN ON THE REGIMENTAL ESTABLISHMENTS OF THE ARMY, ARMY RESERVE, AND AUXILIARY FORCES.

	Normal Establishments, all Ranks, 1900-01.	*Effectives, all Ranks. Numbers by Latest Returns.*
Regular Forces (regimental) Home and Colonial ...	203,852	234,963
Army Reserve, 1st Class ..	90,000	24,128
Militia (including Permanent Staff and Militia Reserve)	132,952	105,122
Ditto Channel Isles ...	3,554	3,630
Ditto Malta and Bermuda	2,731	1,991
Yeomanry (including Staff)	11,907	10,114
Volunteers (including Staff)	265,061	230,785
Total Home and Colonial Establishments	710,057	610,733
Regular Forces (regimental) on Indian Establishment	73,484	66,581
Total	783,541	677,314
For war purposes, temporarily		217,551
Grand total	783,541	894,865

The regular forces are shown as being over their nominal establishment; this is caused by the number of Army and Militia reservists serving in the ranks.

The 1st Class Army Reserve is nearly absorbed into the regular forces for war purposes.

The Militia are below establishment; some

of them are serving as Militia reservists in the Regulars, but their places should have been filled up. The Yeomanry numbers do not include the Imperial Yeomanry, so called, who are now serving in South Africa.

The total deficiency amounts to the large number of 106,227. When it is considered what a very small force 783,000 is for our present population, this state of affairs is not satisfactory. There would probably be no difficulty in largely increasing the numbers of some of the Colonial corps—*i.e.* West India, Chinese, West Africa, and British Central African regiments that are included in the above figures—and thus, with a small increase of British personnel in officers and non-commissioned officers, a considerable addition of excellent fighting material could be made to the Standing Army; but the policy of leaving the protection of our Colonies to native troops may be hazardous.

This next table shows the normal distribution, in times of peace, of the different units of Regulars, including departmental corps, and gives the full establishments of the units. When it was decided some years ago that our Home Army was to consist of three Army Corps of Regulars, the difficulty was to keep the seventy-five battalions of Infantry, that were required to make up the three Army Corps, on home service. Until the recent additions to the Guards and Line, it was impossible to do so: under normal conditions seven Guards and seventy-seven Line battalions should be at home.

Approximate Normal Distribution of Regimental Establishments, 1900–1901.

	Cavalry.			Artillery.					Engineers.			Infantry (excluding Colonial Corps).			Army Service Corps.	R. A. Medical Corps.		Colonial and Native Indian Corps.				Army Ordnance Department.	Army Ordnance Corps.	Army Pay Corps.	Total All Ranks.
	No. of Regiments.		All Ranks.	Number of Batteries or Companies.				All Ranks.	No. of Troops and Companies.	All Ranks.		No. of Battalions.		All Ranks.		Officers.	Men.	No. of Companies.			All Ranks.				
	Household.	Line.		Horse.	Field.	Mountain.	Garrison.			Officers.	Men.	Foot Guards	Line.					Infantry.	Local Artillery.	Local Engineers.					
Total for Home ..	3	16	12,684	18	(b) 110	2	45	30,787	57	511	7,185	(a) 6	* 77	87,776	6,637	397	2,375					223	1,402	532	150.509
Total for Colonies and Egypt	3		1,725		4	2	38	9,351	20	172	2,286	3	29	32,545	467	154	700	75	21	6	12,190	59	342	88	60 079
India ..		9	5,617	11	42	8	27	13,399	1	330	3		52	53,682		332						6	115		73,484
Grand total	3	28	20,026	29	156	12	110	53.537	78	1,013	9,474	9	158	174,003	7,104	883	3,075	75	21	6	12,190	288	1,859	620	284,072

(*a*) One battalion of Irish Guards must now be added.

(*b*) Including five depôts.

* Not including the newly raised Royal Garrison Battalions (four at present) As these are for service abroad, the number of battalions at home will be increased accordingly.

CHAPTER III.

INFANTRY.

LORD BACON describes Infantry as "the nerve of an army," and points out how our mediæval military renown depended on our superiority in that arm. Its permanent utility is in no wise affected by the prominence attained by mounted men in South Africa. We must avoid extremes, and provide an army equal to any emergency.

The increased range and accuracy of the modern rifle have greatly enhanced the value of Infantry in comparison with other arms. When compared with the other arms, Infantry is the easiest to recruit, train, equip, and supply. An Infantry soldier can move on ground which is quite impassable for Artillery and Cavalry. Moveover, an Infantry soldier can always combine movement with fighting. At a distance he uses his rifle, at close quarters his rifle or bayonet. Infantry stands the "wear and tear" of a campaign better than the other arms, and takes up, in comparison with them, only a small amount of room, whether on the march or in camp.

The units of Infantry are—

The Company.
The Battalion.
The Regiment (not a tactical unit).
The Brigade.

A company of Infantry consists of 3 officers, 5 sergeants, 5 corporals, 2 drummers, and 101 privates.

INFANTRY.

LINE BATTALIONS.

	Serving in India.	*S. African War Establishment.*	*Elsewhere Abroad.*	*Home.*
Lieut.-Colonel	1	1	1	1
Majors	4	3 or 4	4	3
Captains	5	6 or 5	5	6
Lieutenants	9	9	8	8
2nd Lieutenants	8	8	8	4
Adjutants	1	1	1	1
Quartermaster	1	1	1	1
Total Officers	29	29	28	24
Sergeant-Major	1	1	1	1
Bandmaster	1	1	1	1
Quartermaster Sergeant	1	1	1	1
Sergeant Instructor of Musketry				1
Orderly Room Sergeant	1	1	1	1
Orderly Room Clerk	1	1	1	1
Sergeant Drummer	1	1	1	1
Sergeant Pioneer	1	1	1	1
Sergeant Master Tailor		1		
Sergeant Cook		1	1	1
Transport Sergeant		1		
Signalling Sergeant		1		
Band Sergeant		1		
Colour Sergeants	8	8	8	8
Sergeants	32	34	32	24
Machine-Gun Sergeant		1		
Total Sergeants	45	53	46	39
Buglers, Drummers, etc.	16	16	16	16
Corporals	40	46	40	40
Privates	900	965	880	760
Total Rank and File	940	1,011	920	800
Total all Ranks	1,032	1,111	1,012	881
Horses		8		4
Mules		127		

Detail of an Infantry Brigade.

PERSONNEL.

	Officers.	*Other Ranks.*	*Total.*
Staff	3	24	27
Four battalions ...	116	3,924	4,040
Supply column ...	5	116	121
Bearer company ...	3	94	97
Field hospital ...	5	56	61
Total ...	132	4,214	4,346
Left at base ...	4	426	430

HORSES.

Private or provided under allowance regulations	40
Riding	27
Draught	298
Pack	8
Total	373

VEHICLES.

One-horse	8
Two-horse	31
Four-horse	50
Total	89

The greater portion of all modern armies is composed of infantry. The great hordes of cavalry of the times of Timurlane have passed and gone. Modern civilisation has lessened the numbers of men who constantly use horses as a means of getting from place to place; therefore, except perhaps in Central Asia, it would be difficult to extemporise large bodies

of trained horsemen. Timurlane in his expeditions over the Hindu Kush in 1398 had a cavalry force 80,000 strong, composed of the best horsemen in Asia. During the later stages of the South African campaign the numbers of mounted troops were greatly increased, being chiefly employed as mounted infantry. The number of Mounted Infantry serving was between 60,000 and 70,000 in June, 1901.

CHAPTER IV.

CAVALRY.

In olden days our Cavalry was composed of—

(1) Knights, or men at arms.
(2) Hobilers, or light horsemen.
(3) Dragoons, or mounted infantry.

The knights were completely covered with armour, both man and horse; they were therefore unwieldy, could simply charge, were unable to manœuvre, when unhorsed were helpless, and were sometimes suffocated by their armour. There were few casualties, as their victors preferred to keep them for ransom. They were armed with a lance, two swords, and a dagger. To save their war horses knights often rode hacks, and were sometimes surprised and taken prisoners before they could mount. In 1553-56 (time of Queen Mary) the knights

were called "cuirassiers," and, although still covered with armour, in addition to their lances and swords they carried long pistols.

The hobilers were mounted yeomen, and were chiefly used for reconnoitring, pursuits, and convoys. They wore much lighter armour and were mounted on lighter horses than the knights. When the knight's name was changed to cuirassier, the hobilers were called "light horse."

They are thus described by Minshen in 1607: "Hoblers, Hobellarii, are certain men that by their tenure maintain a little light nag for the certifying of any invasion made by enemies or such like peril by the sea side. You shall read of them in 18 Ed. III., stat. 2, cap. 7, and cometh from the French word Hobér, an old word to be stirring up and down. Many of the best of these scouts and their nags, or 'hobbies,' came from Scotland and Ireland."

Dragoons, or mounted infantry, were mounted on heavy horses and carried firearms.

Our present Cavalry regiments date from 1661, the Life Guards being formed from gentlemen who were the King's bodyguard during the Civil War, and the Blues were raised during the same year by the Earl of Oxford.

The 1st Royal Dragoons and Scots Greys were the first regiments of Cavalry of the Line, and were raised in 1680-81. In 1685 James II. raised the 1st to 6th Dragoon Guards. It is worth noting that at this early date the Carbineers had *rifled* carbines. The large proportion of

mounted troops used in earlier days is shown by the fact that at the battle of the Boyne in 1690 there were present in the English army—

Horse	2,991
Dragoons	1,270
Total	4,261

and only 15,021 foot.

Another large increase to the Cavalry was made in 1715. Although some Light Dragoons were raised by the Duke of Cumberland in 1746, the first complete regiment of Light Dragoons was raised in 1759, and remains to this day as the 15th Hussars. Six new regiments of Light Dragoons were also raised, but, with the exception of two regiments, were soon disbanded. In 1799 we had—

7	regiments of	Dragoon Guards.
29	„	Dragoons.
1	„	Mounted Riflemen.
31	„	Fencible Cavalry.
6	corps of	provisional Cavalry.

In 1806 some regiments of Light Dragoons were changed to Hussars, and others in 1815 to Lancers.

The units of Cavalry at present are—

The squadron,
The regiment,
The brigade.

A Cavalry division is formed only when specially ordered.

There are thirty-one regiments, each containing three service squadrons and one reserve.

The thirty-one regiments consist of—

3 regiments Household Cavalry.
10 regiments of Dragoons.
6 „ Lancers.
12 „ Hussars.

Hussars are classified as light cavalry, the others as heavy. Recruits join what regiments of Household Cavalry they please, but are enlisted for the corps of Dragoons, Lancers, or Hussars, and when a regiment abroad requires a draft it has to be furnished by one or more regiments belonging to the same "corps." During peace the reserve squadron contains the "casuals" and latest joined recruits; in war time its numbers are largely increased by the men left behind on account of being under age, shortness of service, or for similar reasons. A change has lately been made in the quartering of cavalry regiments at home; instead of being in stations, where there was often only part of a regiment, twelve regiments are now formed into four brigades — at Aldershot, Canterbury, Curragh, and Colchester—the object being to train all ranks in the special cavalry duties of scouting and reconnaisance. As the ground at Colchester and Canterbury is not sufficiently open for cavalry manœuvres on a large scale, these brigades are exercised annually under their brigadiers on Salisbury Plain or other suitable ground. The barracks at Canterbury and Colchester are not yet completed.

The peace establishments of Cavalry regiments by Army Order 1st August, 1900, are as follow:—

REGIMENTAL ESTABLISHMENTS.
REGULAR FORCES.

HOUSEHOLD CAVALRY.

(1st Life Guards, 2nd Life Guards, and Royal Horse Guards, same establishment.)

RANKS.	*Numbers.*
Lieutenant-Colonel ...	1
Majors	3
Captains	6
Lieutenants	8
2nd Lieutenants	3
Adjutant	1
Quartermaster	1
Riding Master	1
Surgeon-Major or Surgeon-Lieut.-Colonel ...	1
Veterinary Officer ...	1
Total Officers ...	26
Warrant Officers—	
Regimental Corporal-Major...	1
Bandmaster	1
Quartermaster Corporal-Major	1
Farrier Quartermaster-Corporal...	1
Corporal Instructor in Fencing	1
Squadron Corporal-Majors	4
Squadron Quartermaster-Corporals ...	4
Orderly Room Corporal	1
Paymaster Corporal ...	1
Corporal Trumpeter ...	1
,, Saddler ...	1
,, Cook	1
Corporals of Horse ...	28
Corporal Farriers ...	8
Total Sergeants ...	53

RANKS.	*Numbers.*
Trumpeters	7
Kettle Drummer ...	1
Total Trumpeters, etc.	8
Corporals	16
Corporal Shoeing Smiths	4
Shoeing Smiths... ...	4
Saddlers	2
Saddletree Maker ...	1
Privates	316
Total Rank and File	343
Total all Ranks ...	432
Riding Horses	275

CAVALRY OF THE LINE.

RANKS.	* Regiment on War Establishment.		Regiment Serving at Home.	Regiment Serving in India.	Regiment in Egypt.	
	Regmt'l Staff & 3 Service Sq'dr'ns.	Reserve Squadr'n.			3 Service Sq'drons.	Depôt at Home.
Lieutenant-Colonel ..	1		1	1	1	
Majors	4		5	4	4	
Captains	3	1	5	5	3	1
Lieutenants	11	2	10	9	7	2
2nd Lieutenants	3	4	8	7	3	
Adjutants	1		1	1	1	
Riding Master		1	1	1	1	
Quartermaster	1		1	1	1	
Total Officers ..	24	8	32	29	21	3
Regimental Sergeant-Major	1		1	1	1	
Bandmaster			1	1	1	
Quartermaster-Sergeant	1		1	1	1	
Farrier Quartermaster-Sergeant	1		1	1	1	
Squadron Sergeant-Major						
Rough Rider		1	1	1	1	
Sergeant Instructor in Fencing & Gymnastics		1	1	1	1	
Orderly Room Sergeant ..	1		1	1	1	
Squadron Sergt.-Majors	3	1	5	5	3	1
,, Quartermaster-Sergeants	3	1	5	4	4	1
Sergeant Trumpeter ..	1		1	1	1	
Saddler Sergeant	1		1	1	1	
Sergeant Cook		1	1		1	
Sergeant Master Tailor ..	1		1		1	
Farrier Sergeants	3	1	5	4	4	
Sergeants	26	12	37	32	20	3
Transport Sergeant ..	1					
Orderly Room Clerk ..	1		1	1	1	
Total Sergeants ..	43	18	62	53	41	5
Trumpeters	6	4	10	9	7	1
Corporals	26	13	38	32	20	4
Shoeing Smith Corporals	3		4	4	3	
Shoeing Smiths	9	4	14	12	7	1
Saddlers and Assistant Saddlers	3	2	5	4	3	
Saddletree Maker	1		1	1	1	
Privates	466	262	720	480	383	100
Total Rank and File	508	281	782	533	417	105
Total all Ranks ..	582	312	888	626	488	114
Horses (including transport animals)	445&136 mules	201	601	525	361	50

* Left at base (additional)—1 officer, 3 sergeants, 50 rank and file.

The regiment is brought to its war establishment by calling up its reserves; but there is no Yeomanry reserve for Cavalry corresponding to the Militia reserve for Infantry.

The war establishment of a squadron is—

1 Major.
1 Captain.
4 Subalterns.
1 Sergeant-major.
1 Quartermaster-sergeant.
8 Sergeants.
2 Trumpeters.
8 Corporals.
108 Privates.
1 Farrier Sergeant.
1 Corporal Shoeing Smith.
3 Private Shoeing Smiths.
1 Saddler.
4 Drivers.
12 Batmen, 2 Cooks, 2 Wagonmen.
18 Officers' Horses.
134 Troop Horses.
8 Draught Horses.
1 Pack Horse.
2 General Service Wagons.

The reserve squadron, when a regiment goes upon service, is left at some station at home as ordered. During the present campaign the reserve squadrons have been grouped together in pairs and formed into provisional regiments of Dragoons, Hussars, and Lancers.

The transport of the regiment when on war establishment consists of

FIRST LINE.

1 Machine gun.
2 S.A.A.* wagons.
3 Pack animals carrying pioneer equipment.
1 Cart for medical stores.

SECOND LINE.

2 Carts for luggage and supplies (headquarters)
2 G.S.† wagons for stores (headquarters).
3 „ baggage (*i.e.*, 1 per squadron).
3 „ supplies „ „

The S.A.A. wagons carry 21 rounds per carbine, 12 rounds per pistol, and 17,600 for machine gun. Also 40 shovels, 20 pickaxes, 16 axes, 12 bill-hooks, and 100 lb. guncotton.

Each pack animal carries 6 pickaxes, 6 spades, 3 axes, 3 saws, and 14½ lb. guncotton.

N.B.—25 lb. of guncotton forms part of the personal equipment of the pioneers.

The regimental supply and baggage wagons carry 1 field ration and 2 grocery rations per man, and 1 corn ration per horse.

The brigade consists of—

3 Regiments cavalry.
1 Battery R.H.A. and its ammunition column.
2 Companies mounted infantry.
1 Bearer company.
1 Supply column.
1 Field hospital.

Sometimes a mounted detachment R. E. is attached to a Cavalry brigade.

* Small arm ammunition. † General service.

Total personnel of the brigade in the field is—

2,214 combatants.
283 non-combatants.

Total 2,497

HORSES.

Riding	1,883
Draught	556
Pack	9
Total	2,448

VEHICLES.

Two-horse ...	32
Four-horse ...	82
Six-horse ...	32 (including 6 R.H.A. guns)
Total ...	136

If cavalry is formed into a division by grouping two or more brigades under one commander, the brigades would be constituted as above. The entire staff would, in addition to the ordinary divisional staff, include the staff for a battalion of mounted infantry and a brigade division Royal Horse Artillery. There would be a mounted detachment of Royal Engineers for the division.

Cavalry are armed suitably for the performance of their scouting duties and for the cavalry fight. For the former, where only a few men at a time are engaged, the carbine is used for self-defence or for defending small posts (the rifle is now superseding the carbine); for the cavalry fight, the sword or lance. The characteristics of cavalry when compared with infantry

and artillery are: they are an expensive arm to equip and maintain, and, to be efficient in scouting, require long training and suitable extent of ground to train on. For a cavalry fight the ground must be fairly open; in broken ground cavalry run great danger of being caught in a trap. Their rapidity of movement gives them the opportunity to catch a hostile force in movement, when infantry would have no chance of doing so, or of seizing a position and holding it till infantry come up.

The distribution of the cavalry forming part of a field army is based on the principle that only sufficient cavalry, and no more, should be allotted to infantry units for the purpose of reconnoitring, and that the bulk of the cavalry should be kept together under a cavalry commander, to act independently under the orders of the officer in command of the whole force. Therefore an infantry brigade taking the field alone would have no cavalry with it; an infantry division, one squadron only; and an army corps, two complete regiments. In the future more attention will be paid to the fire action of cavalry and to scouting rather than to shock tactics. But cavalry tactics of all kinds have been rendered much more difficult and dangerous by the long range of firearms and by smokeless powder.

The necessity for lance and sword is now seriously questioned. More mobility, less weight, and more care of horses will be the leading features of our cavalry in the future.

CHAPTER V.

ARTILLERY.

THE want of artillery was felt by our ancestors, but all they could invent was the use of catapults for throwing arrows; these were improved to various implements, worked on the lever principle with springs, to throw heavy stones. To breach walls, battering rams worked by hand were used. High towers raised on wheels were employed to cover the approach of troops to a besieged town, and from the top of the tower a drop bridge was let down on to the walls, over which the besiegers entered the work. "Greek fire," a combustible material that was difficult to extinguish, the composition of which was a secret, was invented and known long before the introduction of gunpowder into Europe. Gunpowder is supposed to have been the accidental discovery, as far as Europe is concerned, of a German monk in 1320. Gunpowder and artillery were known in China in A.D. 85; and from ancient history it is supposed to have been used by certain tribes in India at the time of Alexander the Great (330 B.C.), whose troops called it "thunder and lightning" and "magic." It was first made in England in the reign of Elizabeth. The date at which guns (artillery) were first used in England is uncertain. Some historians say they were used by Edward III. in Scotland in 1327, and at Cressy, 1346; others say that they were used for the first time in Europe by the Venetians against Genoa in 1378. The

earliest guns were more like mortars, and many were loaded at the breech, and fired large stones up to 1,200 lb. in weight. Guns (*i.e.* mortars) were first made in England in the reign of Henry VIII.; they were 11 inches to 19 inches in calibre, and threw *iron* shells.

Howitzers and hand grenades were invented by the Germans in 1593-4.

Petards were bell-shaped shells, and were used to blow open gates of fortresses.

In early days the Royal Engineers and Royal Artillery formed the same corps; but in 1716 the Royal Regiment of Artillery was formed separately.

For the facts set forth in the following description of the use of artillery by the great Duke of Marlborough we are indebted to that erudite authority, Major R. H. Murdoch, of Woolwich:—

"First with regard to *siege* artillery. This consisted of 'whole cannons' or 'cannons of battery,' whole culverins, 12-pounders, mortars and hawbitzers (howitzers). These were all of English manufacture, as Marlborough would not employ foreign guns with British troops—preferring the sounder material that he got from England. The 'cannons of battery' were to batter the walls of fortresses, and were what we would term '40-pounders'; the 'culverins,' or 24-pounders, cut out the portion battered for a breach; while the 12-pounders repressed sorties.

"Marlborough's *siege* campaigns may be divided into two classes—those which were *artillery*

sieges proper; and those which subsequently became *engineer* sieges, conducted alike by the artillery. Until Louis XIV. issued a decree—which was repeated by the Republic, and also by Napoleon—binding the governors of places to stand at least one assault, it was the custom as soon as a practicable breach had been made for the garrison to surrender. This accounts for how Marlborough in the 1702-3 campaigns was able to carry all before him, on the Meuse and Maes, from Venloo to Huy, completing four successful sieges in almost as many months. He had to cover the besiegers by his army until a breach 25 feet square had been effected; and the army being in position for assault the honour of the besieged was then satisfied, and the garrison surrendered with the honours of war.

"Ricochet fire was then unknown as such, and the enemy's ordnance was seldom dismounted.

"After the decree of Louis we find, in general, regular or *engineer* sieges. Then parallels had to be formed, with the horrible mine and countermine warfare. I may here say that all Marlborough's ordnance, siege and field, was solely of brass (bronze); and that Monsieur de Saint Rémi, a contemporary of Vauban and of Marlborough, tells us that culverins at 300 yards took many days to make a breach—although the English broke ground at 500 yards except when they had to resort to the inferior Dutch powder.

"We have a special illustration of the magnitude of a siege-train in the instance of that remarkable march of the convoy from Brussels to Lille, 1708. This train comprised ninety pieces of ordnance, also sixty mortars up to 15 inch, 3,000 ammunition wagons, 15,000 horses, and extended fifteen miles in length; yet arrived before Lille without the loss of a single wheel! (The sixty mortars were for firing in volleys of thirty.)

"Now, with regard to *field* artillery. When we do have the history of the artillery of Marlborough brought to light it will revolutionise all received opinions of the actions of his era. In that wonderful march of artillery, possibly unprecedented, from the Meuse to the Danube, in the terrific heat of July, 1704, the field artillery train marched twenty-four miles per diem, although it consisted of demi-culverins or 18-pounders, 12-pounders, Sakers or heavy 6-pounders, and Cohorns; and on the day of arrival fought in the memorable victory of Donawert. And when we can rightly comprehend the still more glorious battle of Blenheim, in August, we shall have to alter all our preconceived ideas of the organisation and fire discipline of the field artillery of that period. It was owing to the masterly manner in which Colonel (afterwards Brigadier) Holcroft Blood, who commanded the sixty pieces of English and Hessian artillery against the French right, availed himself of the order of the commander-in-chief to post his guns at discretion on the ridges,

to the splendid intuition of Marlborough that upon the corps artillery would depend the issue of the day, and to the excellent practice of our gunners, that, on the 100 guns of the French right being at last silenced, after our brave and devoted infantry had been twice repulsed, Marlborough himself led on his re-inspirited infantry and cavalry—with their battalion 3-pounders and 1½-pounder gallopers—to the third and successful assault which consummated his own glory and the morale of the three armies."

In 1745, in Flanders, our artillery consisted of—

10 6-pounders.
27 3-pounders.
6 Gallopers.
4 8 in. howitzers.

During the Seven Years' War—1756-63—two guns (3 or 6-pounders) were attached, with gunners to work them, to each infantry battalion. At this period light 6-pounders were utilised as field guns with four or five horses, and the 3-pounders were mounted on a galloping carriage with three horses.

In 1794 (in the War of the French Revolution) a corps of artillery drivers was formed, and since this period we have always had horse and field artillery, although the drivers were not enlisted as part of the regiment until 1822.

After 1816 the artillery was greatly reduced; and during the years 1819-46 there were only seven troops R.H.A., and those troops at home had only two guns. The only field batteries we had were kept out of the way, in Canada, to

prevent their reduction. At Woolwich horses and guns for three field batteries were kept, and batteries were sent there from other stations to go through a few months' course. In 1852-3 the Royal Artillery was organised in battalions of eight companies, the headquarters of every battalion being at Woolwich. At this time we had 104 guns horsed. In 1855 the Board of Ordnance was abolished, and the Royal Artillery came under the direct control of the Commander-in-Chief. In 1859 the brigade system was introduced; companies were called batteries, and different standards fixed for gunners and drivers. In 1877 the brigade system was modified, and the battery became an independent unit.

The Royal Regiment of Artillery consists at present of—

Royal Horse Artillery ...	28	batteries.
Royal Field Artillery ...	151	„
Royal Garrison Artillery...	104	companies.
Mountain batteries ...	10	„

And depôts.

The officers of the regiment used to be on one list, but recently they have been separated, the officers of the Horse and Field Artillery being on one list and interchangeable, the officers of the Garrison being on a separate list by themselves, but include officers of the Mountain Batteries.

The units of Artillery for the Horse and Field Artillery are the battery and brigade division; for Garrison Artillery, the company and division; for Mountain Artillery, the battery.

Royal Horse Artillery.

RANKS.	*HOME.*		*INDIA.*	*SOUTH AFRICA (War).*
	Higher.	*Lower.*		
Majors	1	1	1	1
Captains	1	1	1	1
Lieuts. and 2nd Lieuts. ...	3	3	3	3
Riding Master				
Quartermaster				
Total Officers	5	5	5	5
Sergeant-Major (Warrant Officer)				
Quartermaster-Sergeant .				
Battery Sergeant-Majors ...	1	1	1	1
Battery Quartermaster-Sergts.	1	1	1	1
Orderly Room Sergeant ...				
Sergeant Trumpeter				
Sergeants	6	6	6	6
Sergeant Farriers	1	1	1	1
Total Sergeants	9	9	9	9
Trumpeters	2	2	2	2
Corporals	6	5	6	6
Bombardiers	6	5	6	6
Collar Makers	2	2	1	2
Wheelers	2	1	1	2
Shoeing Smiths	4	3	2	5
Gunners	74	65	76	75
Drivers	68	58	54	71
Total Rank and File ...	162	139	146	167
Total all Ranks	178	155	162	183
Horses	125	87	153	186

Royal Field Artillery.

RANKS.	*HOME.*		*SOUTH AFRICA (War).*	*HOWITZER.*		*EGYPT.*	*INDIA.*
	Higher.	*Lower.*		*Home.*	*South Africa. (War).*		
Majors	1	1	1	1	1	1	1
Captains	1	1	1	1	1	1	1
Lieuts. and 2nd Lieuts. ...	3	3	3	3	3	3	3
Total Officers	5	5	5	5	5	5	5
Battery Sergeant-Majors ...	1	1	1	1	1	1	1
,, Quartermaster-Sergeants	1	1	1	1	1	1	1
Sergeants	6	6	6	6	6	6	6
Sergeant Farriers	1	1	1	1	1	1	1
Total Sergeants ...	9	9	9	9	9	9	9
Trumpeters	2	2	2	2	2	2	2
Corporals	5	5	6	6	6	6	6
Bombardiers	5	5	6	6	9	6	6
Collar Makers	2	2	2	2	2	2	1
Wheelers	1	1	2	1	2	1	1
Shoeing Smiths...	3	2	4	2	4	3	2
Gunners	70	56	77	56	86	70	76
Drivers	64	54	62	54	74	64	54
Total Rank and File	150	125	159	127	183	152	146
Total all Ranks ...	166	141	175	143	199	168	162
Horses	90	66	136	60	161	138	110

ROYAL HORSE AND FIELD ARTILLERY.

AMMUNITION UNITS.

RANKS.	AT HOME		SOUTH AFRICA (WAR).						
	Ammunition Column.	Ammunition Park.	Cavalry Brigade.	Brigade Div. (3 Batteries) R.H.A.	Infantry (Divisional).	Corps Troops (Independent).	Brigade Div. R.F.A.	Howitzer Brigade Div.	Park (War Establishment).
Lieutenant-Colonel ..									1
Majors			1	1	1	1		1	3
Captains			1	1	1	2	1	1	4
Lieutenants and 2nd Lieutenants			2	3	3	6	2	2	9
Total Officers ...			4	5	5	9	3	4	17
Sergt.-Majors (Warrant Officers)	1	1	1	1	1	1	1	1	3
Battery Sergt.-Majors ...			1	1	1	3	1	1	3
Battery Quartermaster-Sergeants			1	1	1	3	1	1	3
Sergeants		1	4	6	6	15	4	6	19
Sergeant Farrier and Carriage Smiths ...			1	1	1	3	1	1	3
Total Sergeants ...		1	7	9	9	24	7	9	28
Trumpeters			2	2	2	4	2	2	6
Corporals			4	6	6	15	4	6	18
Bombardiers			6	9	9	15	4	6	18
Collar Makers			2	3	3	6	2	2	6
Wheelers			2	3	3	6	2	2	6
Shoeing and Carriage Smiths			3	4	5	9	3	3	15
Gunners	6	12	28	32	49	90	26	44	154
Drivers			25	38	36	89	38	33	
Total Rank and File	6	12	70	95	111	230	79	96	217
Total all Ranks ...	7	14	84	112	128	268	92	112	271
Horses			63	91	92	226	85	91	85
Mules			130	128	306	438	98	266	

Royal Garrison Artillery.

MOUNTAIN BATTERIES.

RANKS.	*Home.*	*Egypt.*	*War.*	*South Africa.*	*India.*
Majors	1	1	1	1	1
Captains	1	1	1	1	1
Lieuts. and 2nd Lieuts. ...	3	3	3	3	3
Total Officers ...	5	5	5	5	5
Battery Sergeant-Majors ...	1	1	1	1	1
,, Quartermaster-Sergeants	1	1	1	1	1
Sergeants	4	6	7	6	6
Sergeant Farrier	1	1	1	1	1
Total Sergeants ...	7	9	10	9	9
Trumpeters	2	2	2	2	2
Corporals	4	6	9	6	6
Bombardiers	4	6	9	6	6
Collar Makers...	2	2	3	2	1
Wheelers	2	2	3	2	
Shoeing Smiths	2	3	3	3	
Gunners...	120	82	237	147	82
Total Rank and File	134	101	264	166	95
Total all Ranks ...	148	117	281	182	111
Horses	11	11	18	11	6
Mules	45	138	177	132	138

ROYAL GARRISON ARTILLERY.

COMPANY ESTABLISHMENTS.

RANKS.	SIEGE COMPANIES.		Southern, Eastern, Western, Thames and South Eastern Districts. Guernsey, Scotland and Ireland.	Jersey.	Malta and Gibraltar.	St. Lucia and Barbados.
	Home and South Africa.	South Africa (Special).				
Majors	1	1	1	1	1	1
Captains	1	3	1	1	2	2
Lieutenants and 2nd Lieutenants	4	8	3	3	4	4
Total Officers ...	6	12	5	5	7	7
Company Sergt.-Majors	1	1	1	1	1	1
Company Quartermaster-Sergeants	1	1	1	1	1	1
Sergeants	9	13	7	6	11	11
Total Sergeants ...	11	15	9	8	13	13
Trumpeters	2	4	2	2	3	3
Corporals	8	12	5	5	8	8
Bombardiers	12	12	5	5	8	8
Wheelers						
Gunners	152	268	133	112	182	149
Total Rank and File	172	292	143	122	198	165
Total all Ranks ...	191	323	159	137	221	188

ROYAL GARRISON ARTILLERY.

COMPANY ESTABLISHMENTS—(*continued*).

RANKS.	*Mauritius, Ceylon, Singapore, and St. Helena.*	*Bermuda, Jamaica, Hong Kong, and Esquimalt.*	*South Africa (War).*	*Cape Colony.*	*Halifax, N.S.*	*Sierra Leone.*	*Wei-Hai-Wei.*	*India.*	
Majors	1	1	1	1	1	1	1	1	1
Captains	1	2	1	1	2	1	1	1	1
Lieutenants and 2nd Lieutenants ...	4	4	3	4	4	2	3	3	3
Total Officers ...	6	7	5	6	7	4	5	5	5
Company Sergeant-Majors	1	1	1	1	1	1	1	1	1
Company Quarter-master-Sergeants	1	1	1	1	1	1	1	1	1
Sergeants	7	11	7	7	11	4	6	4	7
Total Sergeants	9	13	9	9	13	6	8	6	9
Trumpeters	2	3	2	2	3	2	2	2	2
Corporals	5	8	5	5	8	4	5	5	6
Bombardiers ...	5	8	5	5	8	4	5	5	6
Wheeler									1
Gunners	129	168	129	119	193	84	96	122	72
Total Rank and File	139	184	139	129	209	92	106	132	85
Total all Ranks ...	156	207	155	146	232	105	121	145	101

Royal Artillery.

EUROPEAN STAFF OF LOCAL COMPANIES AT COALING STATIONS.

RANKS.	*Wei-Hai-Wei.*	*Hong Kong.*	*Singapore.*	*Ceylon.*	*Mauritius.*	*Jamaica.*	*St. Lucia.*	*Sierra Leone.*	*TOTAL.*
Majors		1		1				1	3
Captains	1	4	2	2	2	1	1	1	14
Lieutenants	2	8	4	4	4	2	2	1	27
Total Officers ...	3	13	6	7	6	3	3	3	44
Company Sergeant-Majors						1	1		2
Company Quarter-master-Sergeants		4	2	2	2	1	1	1	13
Sergeants	4	5	2	2	6	1	1	1	22
Total Sergeants	4	9	4	4	8	3	3	2	37

The brigade division R.H.A. consists of two batteries; R.F.A., three batteries.

The R.H.A. is at present armed with a 12-pounder breech-loading gun weighing 6 cwt., and with limber complete 30 cwt. It is probable that this gun may shortly be changed, as its range is not long enough.

The R.F.A. is armed with a 15-pounder breech-loading gun, the gun weighing 7 cwt., and with limber complete 38 cwt.

The 5-in. howitzer weighs 9 cwt., and with limber complete 48 cwt.

Each battery of Horse and Field Artillery on service is always accompanied by six ammunition wagons; the howitzer battery has nine.

The 12-pounder and 15-pounder guns are drawn by six horses, the howitzer by eight.

The mountain batteries are armed with a 2·5 in. muzzle-loading gun weighing 400 lb., now being replaced by a gun that will fire a 10-lb. shell.

The supply of ammunition to artillery in the field is a matter of difficulty on account of its weight and bulk.

The R.H.A. 12-pounder carries with it in its limber and wagon 134 shrapnel and 8 case; in its ammunition column, 95 shrapnel and 4 case; in the ammunition park, 59 shrapnel and 3 case. Total in field, 288 shrapnel and 15 case. The R.H.A. guns with army corps carry practically the same ammunition.

The R.F.A. 15-pounder gun carries in its limber and wagon 142 shrapnel and 8 case; in divisional ammunition column, 74 shrapnel and 4 case; in ammunition park, 73 shrapnel and 4 case. Total in field, 289 shrapnel and 16 case.

A change is being made in the present organisation of ammunition columns.

The 5-in. howitzer carries with it in its limber and wagon 88 shells, and in its ammunition column 418 shells per battery.

A few tools are carried by batteries on their limbers and in their ammunition wagons.

In the field, artillery is distributed among the other arms in the proportion of one battery R.H.A. to each Cavalry brigade, and two batteries R.H.A. with the "corps troops" of an army corps.

Field Artillery is distributed in the proportion of three batteries, *i.e.* one brigade division (will probably be increased to two brigade divisions), to an Infantry division, and six batteries with the "corps troops" of an army corps.

No artillery is allotted to an Infantry brigade at present.

The recent war in South Africa has shown the possibility of bringing into action heavier guns than ordinary field artillery in certain localities, by providing them with a travelling-carriage.

The Artillery has its own reserves, but these are heavily drawn upon for active service, to provide the personnel for the ammunition columns, and other units which do not exist in peace, in addition to filling up gaps in the batteries. The Militia and Volunteers form a good second line of garrison artillery, but at present they are not of much use as field artillery owing to the want of proper equipment and training; they are rapidly becoming more useful, and some Volunteer batteries are quite fit to take the field.

Artillery is an expensive arm to maintain; modern guns are being constantly improved, necessitating the rearming of the whole regiment. Gunners require long training, and skilled artificers are required to keep the arm in working order. Artillery fire is effective at ranges at which infantry fire would be useless; but at close quarters its defensive power is greatly diminished, and ceases altogether when in movement. The effective action of artillery

depends greatly upon ground, weather, and the nature of the projectile used.

The supplying of ammunition to other arms in the field forms part of the duty of the artillery. The ammunition column that accompanies a cavalry brigade carries a supply of ammunition for the cavalry, mounted infantry, and for their machine guns as well as for the battery.

The divisional ammunition column that accompanies an infantry division consists of 41 carts and wagons, and carries ammunition for all units in the division.

The ammunition park that accompanies the army corps also carries ammunition for all units in the corps.

CHAPTER VI.

ROYAL ENGINEERS.

THE corps of Royal Engineers can claim to have "come over with William the Conqueror," and are therefore the oldest corps in the Service. There was only a very small permanent staff of Engineers kept up, and for each campaign large numbers of men required for engineering operations—such as road-making and carrying out the sieges of fortresses—were temporarily engaged. Thus Edward I., in his campaign in Wales in 1287, had 2,000 men mustered as road cutters and sappers. At the siege of Calais in 1347, the corps under the chief engineer, John Graynard, consisted of

masons, carpenters, smiths, engineers, miners, tent makers, armourers, and gunners; men of all these trades, except perhaps the last three, would now also be found in the ranks of the Royal Engineers. In Henry V.'s campaign in France in 1417, during which the fortresses of Cherbourg and Rouen were taken, the Engineer corps consisted of 1,000 men. Until 1716 they formed one corps with the Royal Artillery, and were not brought under the direct control of the Commander-in-Chief until 1855.

The corps is now organised as follows:—

60 Companies numbered 1 to 60.
8 Companies lettered A, B, C, D, E, G, H, and M.
1 Bridging Battalion of four troops.
1 Telegraph Battalion of Headquarters and three divisions.
1 Field Depôt.
1 Field Troop.
4 Field Parks.
6 Balloon Sections and Depôt.
1 Coast Battalion (ten sections).

The companies are subdivided into—

Fortress Companies.
Submarine Mining Companies.
Field Companies.
Depôt Companies.
Survey Companies.
Railway Companies.

In the field all skilled labour is found or supervised by the Royal Engineers, the working parties being found by the Infantry.

ROYAL ENGINEERS.

UNITS.	Warrant Officer.	Quartermaster-Sergeants.	Troop and Company Sergeant-Majors.	Troop and Company Quartermaster-Sergts.	Engineer Clerks.	Sergeants.	Farrier Sergeants.	Total Sergeants.	Trumpeters and Buglers.	Corporals.	Shoeing and Carriage Smith Corporals.	Second Corporals.	Shoeing and Carriage Smiths.	Sappers.	Drivers.	Total Rank and File.	Total all Ranks.	HORSES. Riding.	Draught.	Pack.	Total Horses.
Telegraph Battalion—																					
Two Divisions in South Africa { Mounted			2	2		10	2	16	8	8	2	8	8		81	107	131	62	252		314
Two Divisions in South Africa { Dismounted	1			2		14		16		13		9		487		509	526				
3rd Division, Home { Mounted			1	1		3		5	2	3	1	3	1		25	33	115	9	24		33
3rd Division, Home { Dismounted				1		3		4		3		3		65		71					
Field Troop, South Africa .. { Mounted			1	1		5	1	8	3	4	1	4		71	41	121	148	46	34		80
Field Troop, South Africa .. { Dismounted										1				15		16					
Balloon Section { Mounted						1		1		1			1		9	11	43	1	8		9
Balloon Section { Dismounted			1			1		2	1	3		3		22		28					
Submarine Mining Companies (Central Stations)			1	1		9		11	3	11		11		109		135	145				
Submarine Mining Companies, Service Companies			1		1	3		5	2	3		3		31		37	44				
Submarine Mining Companies, Coast Battalion		2	1			2		5		2		2		11		15	20				
Railway Companies		1	1			4		6	2	9		8		118	11	146	154				
Survey Companies			2			9		11	2	10		10		79		99	112				
Fortress Companies			1			5		6	2	6		6		73		85	94				
Steam Road Transport			1	1		4		6	2	7		7		80	10	104	112	10			
Local Fortress Company (West Indies)		1	1			4		6									6				
Sierra Leone Fortress Company ..						2		2						1		1	3				
Local Submarine Mining Comps., Europeans .. { Hong Kong Company }		1	1		1			7		6		11		40		57	4				

ROYAL ENGINEERS.

RANKS.	Troop Bridging Battalion.		Field Park.	Field Company, South Africa.		FIELD COMPANIES. (Home), Higher Establishment.		(Home), Lower Establishment.	
	Mtd.	Dismtd.		Mtd.	Dismtd.	Mtd.	Dismtd.	Mtd.	Dismtd.
Troop Sergeant-Major	1								
Company Sergeant-Majors					1		1		1
Company Quartermaster Sergeants									
Troop Quartermaster-Sergeants ...	1			1		1		1	
Sergeants	3	3	1	1	5	1	5	1	3
Sergeant Farriers ...	1		1						
Total Sergeants	6	3	2	2	6	2	6	2	4
Trumpeters and Buglers	2			1	1	1	1	1	1
Corporals	3	6	2	1	7	1	6	1	4
Shoeing and Carriage Smith Corporals				1		1			
Second Corporals ...	3	5	1	1	6	1	6	1	4
Shoeing and Carriage Smiths ...	2		1					1	
Sappers		88	8		154		134		64
Drivers	32		11	27		23		19	
Total Rank and File	40	99	23	30	167	26	146	22	72
Total all Ranks	150		25	207		182		102	
Horses, Riding ...	8		2	6		5		5	
Horses, Draught ...	34		14	39		18		14	
Horses, Pack ...				5		3		2	
Total Horses ...	42		16	50		26		21	

Engineer units are distributed between cavalry brigades (when specially ordered), cavalry divisions, infantry divisions, and the headquarters of an army corps.

A mounted detachment forms part of a cavalry division, and if specially ordered is attached to an independent cavalry brigade. It is equipped with a light description of transport, so as to be able to keep up with cavalry—six pack animals, six forage carts, and six S.A.A. wagons carrying guncotton and tools.

A field company, with heavier wagons, forms part of an infantry division. Its transport consists of five pack animals, four double tool carts, three forage carts, one forge wagon with technical equipment, and two pontoon wagons—carrying guncotton, tools, technical equipment, stores, together with a small quantity of bridging material sufficient for 15 yards of heavy bridging or 25 yards of light.

A large proportion of Engineers belong to the "corps troops" of the army corps. The units are—

1 Field Company.
1 Pontoon Troop.
1 Field Park.
1 Telegraph Division.
1 Balloon Section.
1 Railway Company.

A pontoon troop comprises sixteen pontoon wagons and four wagons carrying trestles, sufficient material to construct 105 yards of heavy bridging or 185 yards of light. (The Thames is 84 yards wide at Teddington, and at

London Bridge at low tide 220 yards. The Severn above Gloucester is 50 yards.)

A field park, besides carrying a reserve of tools, guncotton, and other ordinary equipment, carries the necessary stores for printing, map reproducing, and photography.

A telegraph division is subdivided into headquarters and four sections. Its transport consists of four cable carts, twelve wagons for air line, nine forage carts, and five G.S. wagons, carrying 32 miles of cable and 60 miles of air line. On service, each division is supplied with 128 miles of cable and 390 miles of air line.

The men of the R.E. are better paid than the ordinary soldier, and the officers all come from the Royal Military Academy, Woolwich. No Militia officers have yet been appointed. The dismounted men of the R.E. are armed with rifles, and a certain amount of ammunition is carried by the men and in the ammunition columns as a reserve. The duties of the corps are essentially technical, but these duties must often of necessity be carried out in very exposed or isolated positions, where the men may be called upon to defend themselves against superior numbers. The Engineers enlist many men for short service, and therefore have a substantial reserve of men trained in their ranks; and they have also a good reserve in the Post Office and Railway Reserves, as well as in the Militia and Volunteer Engineers.

The art of field fortification is now a necessary part of the instruction of all military men, and the value of permanent fortification is modified

by the great part played by improvised works in modern war, like those of Sebastopol, Richmond, and Plevna.

CHAPTER VII.

MOUNTED INFANTRY.

MOUNTED infantry dates back to the introduction of firearms—the dragoon of those early days being nothing but a mounted infantry soldier. Gustavus Adolphus, in the Thirty Years' War, was known as the "Dragoon King."

Curso, in his "Military Instructions for Cavalry," published in 1632, describes dragoons in an interesting fashion:—

"The last sort of which our horse-troopes are compounded are called Dragons, which are a kind of footmen on horsebacke, and doe now, indeed, succeed the light horsemen, and are of singular use in all the actions of warre. Their armes, defensive, are an open head-piece, with cheeks, and a good buffecoat with deep skirts; and for offensive armes, they have a faire dragon, fitted with an iron-worke, to be carried in a belt of leather, which is buckled over the right shoulder, and under the left arme, having a turnell of iron with a ring, through which the piece runs up and downe; and these dragons are short pieces of sixteen inches the barrell, and full musquet bore, with firelocks or snaphaunces; also a belt, with a flaske pryming-box, key, and bullet-bag, and a good sword.

"These Dragons in their marches are allowed to be eleven in a rank or file, because, when they serve, it is many times on foote, for the maintenance or surprising of strait wayes, bridges, or foords, so that when ten men alight to serve, the eleventh man holdeth their horses, so that to every troope of an hundred, there is an hundred and ten men allowed."

However, they fell into disuse in the eighteenth century, and we hear nothing of them in Napoleon's campaigns. In modern times they were used by the Americans in their war of North *v.* South (1861-65). Since that time their use has been advocated by many of our best military writers, but until quite recently mounted infantry has not formed part of our Army organisation. At the present time there is no permanent force of mounted infantry, but throughout Line regiments, companies and sections are to be found that have been trained in mounted infantry duties. A permanent staff and a supply of cobs are kept at Aldershot, Salisbury Plain, and other convenient stations; and sections drawn from different Line regiments are sent to these stations to be trained by the permanent staff. In this way it is possible to train a large number of men during the course of a year on the same cobs. The unit of mounted infantry is the company, which is made complete with artificers. Two companies are attached to a cavalry brigade.

Though mounted Infantry is not at present attached to any other tactical unit, there is no doubt that in the future it will be.

MOUNTED INFANTRY.

RANKS.	*SOUTH AFRICA.*			
	Company with Cavalry Brigade.	*Machine Gun Section.*	*Company with Infantry Battalion.*	*Staff of a Battalion of Mounted Infantry.*
Lieutenant-Colonel ...				1
Major	1		1	
Captain				
Lieuts. and 2nd Lieuts. ...	4	1	3	
Adjutant				1
Quartermaster				1
Total Officers	5	1	4	3
Sergeant-Major Acting ...				1
Quartermaster-Sergeant Acting				1
Colour-Sergeant	1			
Orderly Room Sergeant ...				1
Sergeant Saddler				1
Sergeants	4	1	4	
Total Sergeants ...	5	1	4	4
Buglers	2		2	
Corporals	6	1	6	
Shoeing Smiths	4		4	
Saddlers	1		1	
Drivers	2	6	6	
Privates	112	8	113	6
Total Rank and File	127	15	132	6
All Ranks	137	17	140	13
Horses, Riding	120	4	130	6
Horses, Draught	4	12	12	
Mules	22		*as required*	

CHAPTER VIII.

CYCLISTS.

THESE are now a part of every modern army. Their functions and instruments have been fully discussed by Colonel Eustace Balfour and others. We cannot do better than utilise short notes published July 27th by a retired colonel in the *Army and Navy Gazette*:—

"The cyclist, like the mounted infantryman, has now a distinctly recognised place in our military organisation. The functions of the two are in the main similar, while their relative capacities vary according to the limitations imposed upon them by the nature of their respective means of locomotion. On the whole it would seem that with us the cyclist has the widest field of usefulness open to him in connection with home defence, while the mounted infantryman will figure most effectively in expeditions beyond the sea. The enclosed character of this country, traversed in all directions by good roads, flanked by hedges and ditches forming serious obstacles to troops, is greatly in favour of the cyclist as compared with the soldier mounted on a horse, both on account of his superior mobility when travelling far afield and because there is less probability that the agent carrying him will fail him *en route*. In an open country, broken only by natural obstacles, the horse will carry the rider through places unapproachable by

the man on wheels, and should the horse break down the possibility of obtaining a remount will be less remote. But in most countries in which we might have to operate a useful place will no doubt be found for military cyclists in future wars.

"The most convenient organisation for cyclists is that of the company, as laid down in the manual of 'Cyclist Drill' issued with Army Orders, dated September 1st, 1900. The company is commanded by a captain, and is divided into four sections, each under a lieutenant. A section, when it exceeds ten men, is divided into two sub-sections for convenience of control and command. Every Volunteer battalion now either has or is forming a cycle company. The interest, moreover, aroused last year by the praiseworthy efforts of Major-General Maurice to give a prominent place to cyclists in any general scheme adopted for home defence cannot fail to bear good fruit, and to give a powerful impetus to the movement. 'The special utility of cyclists lies in the fact (says the drill-book) that they can traverse great distances along roads at a high speed; but it cannot be too strongly impressed that, in contact with the enemy, cyclists are infantry working with such changes of formation as are involved by the possession of cycles.' In a word, the military cyclist possesses a strong individuality.

"The extent to which battalions of the regular Army should be provided with cyclist companies,

having regard to the now well-established position of mounted infantry, is a matter for careful consideration. The action of mounted infantry, as well as the nature of their mounts and their consequent training, tend to divert them further from the foot soldier and nearer to the mobile troops in their operations in the field. It will probably be found that all required conditions will be satisfied best by forming mounted infantry into independent battalions to be attached to brigades and divisions, and by providing each company of infantry with a cyclist section, such sections when acting together to form a company. The men of these companies should be specially selected and should receive extra pay. They should, as far as possible, be relieved of duties outside their own company, and should be trained in patrolling, scouting, and sending in messages by relays working between relief posts. They should be taught map-reading, road-reporting, and marching by the compass, the stars, etc., and should be instructed in demolition work, and, above all, in the care and mechanism of their bicycles. Most of the possibilities open to mounted infantry might be attained by a body of cyclists with an army on the move. They might give material support to the forward cavalry screen by holding defensive points on which the cavalry could fall back. They might be pushed out to seize a bridge or a railway station, to damage the line, or to turn an enemy's flank, and in rear-guard

actions they would be invaluable. In camp they should be nearest to the road at the head of the column, so as to get away first. All facilities should be given to cyclists, and nothing done to hamper them or unduly press the pace. A high state of discipline must be maintained, as the physical strain on the men is more severe than with men on foot, and the consequent tendency to demoralisation greater. Their average pace is estimated at from four to eight miles an hour according to conditions of wind, roads, etc., giving from thirty-two to sixty-four miles for a day's march of eight hours. Work of so arduous a nature being expected from cyclists, they should travel as lightly equipped as possible. It is here that the motor may assist. For example, a motor tricycle might carry articles for repairs and a small reserve of ammunition, and a motor waggon the *impedimenta* of the men, with more ammunition. Each cyclist should carry in his bandolier and waist-belt 150 rounds. The drill-book provides for the carriage on the bicycle of each man's greatcoat, and occasionally his valise. It would be well to relieve him, as a rule, of both, certainly of the valise; but let his machine carry a serviceable entrenching tool. The pattern bicycle issued by the War Department was adopted in 1898, and amongst other instructions in the drill-book are those for repairing punctured tyres. It is a question whether it would not be better to adopt a machine with rubber tyres

not susceptible to puncture, as being the best for wear and tear. It is safe to predict that the cycle will play an important *rôle* in future wars."

It is generally understood that the cyclist section of the Inns of Court Rifles was of much service in South Africa—hence they are likely to be useful beyond the narrow seas.

Hitherto the tactical use of cyclists has been confined to reconnoitring and similar duties, upon which only a few men are employed; but now that it is contemplated to use them in comparatively speaking large numbers several questions arise, and to assist in arriving at the solution of these questions cyclist manœuvres have been held recently in the Woolwich and Aldershot Districts.

Among the questions to be settled are the following:—

What should be the unit for cyclists when employed in large numbers?

In what formations should they move, and what depth of road will these formations take up?

How are orders to be passed from the front through a long column of cyclists when on the move? and

When contact with the enemy is gained, what is to become of the cycles?

In the attack the men will be moving further and further away from their machines, and the time may come when they practically will have lost their cycles altogether, unless

some method is introduced of one man (dismounted) wheeling four machines so that he can keep within a reasonable distance of the dismounted troops. A detached force pushed a considerable distance from the main body might find itself in a very awkward position if deprived of its mobility by the loss of its cycles. Again, when holding a rear-guard position, how long can the dismounted men hold the position and yet give themselves time to regain their cycles, mount, and get away without serious loss?

These and similar tactical questions must be answered before the organisation of cyclists in large bodies is finally settled.

Automobile transport will have to form part of the cyclist unit, as when large numbers are employed rations, a certain amount of kit, reserve ammunition, and a small supply of entrenching, demolition, and repairing tools and materials must be carried. The mobility of the cyclist must not be lessened by overweighting his machine.

Moreover, the officer commanding cyclists must have a machine at his disposal, which will put him in the same relative position as is a mounted officer as compared with a foot soldier.

The motor car, besides speed, possesses the great advantages that the occupant need not stop to consult his map, to use his field glasses, or to write his orders. Motors would also have to be provided for staff officers and orderlies

required to carry despatches, as the fast riding cyclist cannot, when the column is moving at a good pace, deliver his orders in anything like a reasonable time if he has to pass from behind a long column to the front.

CHAPTER IX.

THE ARMY SERVICE CORPS.

THE Army Service Corps, upon which falls the responsible and onerous duties of transport and supply, has been evolved, after many changes, out of the old Military Train and Commissariat Department.

The corps serves at home, in Egypt, and in the Colonies, but not in India. Nearly all the "B," or Quartermaster-General's Department, staff appointments are held by officers of the Army Service Corps.

The corps at present consists of fifty-nine companies and two remount companies, at Woolwich and Dublin.

The establishment of the corps has recently been considerably increased.

Owing to the great expense that would be entailed by keeping up a large amount of transport during peace, the Army Service Corps merely forms a highly trained military nucleus, which on the outbreak of hostilities is expanded by civilian personnel to meet the require-

ments of the field army. During peace, supplies of provisions, groceries, forage, and fuel are supplied and delivered by contractors. In war this has all to be done by the Army Service Corps. Thus, an auxiliary company of Army Service Corps, to work on the lines of communication with draught mules, would have a military personnel of—

Officers	3
Warrant Officers	4
Sergeants ...	9
Rank and File ...	26
Total ...	42

and 26 riding horses.

The civilian personnel would be—

Interpreter ...	1
Superintendents	40
Artificers ...	19
Drivers	170

with 830 mules and 41 riding horses.

It is estimated that two such companies (draught mules) will carry five days' supplies for an Infantry division.

The supply of a great army in the field is one of the most difficult of enterprises as well as the most important; failure for a few days may mean the ruin of a nation. The sufferings caused by careless or insufficient transport arrangements are awful. Not to speak of such appalling catastrophes as the annihilation of Napoleon's army in Russia in 1812, examples of the terrible sufferings of armies even in their

own countries are common in history; witness the condition of Chanzy's and Faidherbe's and Bourbaki's armies in 1871.

CHAPTER X.

THE ARMY MEDICAL SERVICE AND DEPARTMENTAL CORPS.

THE Army Medical Service consists of—

The Army Medical Staff.
The Royal Army Medical Corps.
The Army Nursing Service.

The officers are all medical officers except the quartermasters, who are promoted from the ranks. There are nineteen companies Royal Army Medical Staff Corps, and a depôt and training school at Aldershot. In addition, a large number of retired medical officers are employed, and there are companies of the Militia and Volunteer Medical Staff Corps.

The Departmental Corps consist of—

(1) The Army Chaplain's Department.
(2) The Army Ordnance Department.

There are nineteen companies in this corps, and a depôt at Woolwich.

The corps goes to Egypt and the Colonies, but not to India. It has charge of all ordnance stores, *i.e.* camp, barrack, and personal equipment, harness, saddlery, arms, ammunition.

(3) The Army Pay Department, which is responsible for all financial duties.

The N.C.O.'s and men are employed as clerks. Formerly every battalion had its own paymaster, but now paymasters have the troops serving in a certain area allotted to them.

(4) Army Veterinary Department, for veterinary duties.

(5) Corps of Military Mounted Police.

The officers are specially appointed, and the N.C.O.'s and men specially selected from various regiments.

MILITARY POLICE.

MOUNTED AND DISMOUNTED.

RANKS.	*Military Mounted Police.*	*Foot Police, Home and Abroad.*
Quartermasters	2	
Warrant Officer: Sergeant-Majors ...	1	1
Quartermaster-Sergeant	1	
Squadron Sergeant-Majors	2	
Colour-Sergeants		3
Sergeant Farrier	1	
Sergeants	16	32
Total Sergeants	20	35
Trumpeter	1	
Corporals	30	40
Corporal Shoeing Smith	1	
Privates	110	216
Total Rank and File	142	256
All Ranks	165	292
Horses	160	

Army Schools.

Schoolmasters are appointed, after passing the required examination, on probation. The officers are promoted from schoolmasters.

CHAPTER XI.

THE INDIAN ARMY.

The Indian Army (both British and native troops) is maintained for the following purposes:—

(1) To safeguard India from external attack.

(2) To ensure the impossibility of a successful internal revolution.

(3) To share in operations outside of India or beyond seas.

(4) To keep complete check on the armies of feudatory native states.

(5) To maintain the authority of the civil officers of the Crown, and to enforce law and order.

When troops land in India they are at once taken on the Indian Establishment and paid by the Government of India.

The army in India is composed of—

British Troops.
Native Army.
Volunteers (Europeans and Eurasians).
Military Police (Burma and Assam).
Hyderabad Contingent.
Imperial Service Troops
Reserves.

The British troops in India under normal conditions consist of—

9 Regiments of Cavalry.
11 Batteries R.H.A.
42 Batteries R.F.A.
8 Mountain Batteries.
27 Companies R.G.A.
Ammunition Column and Staff.
330 Officers and 3 Sergeants, R.E.
52 Battalions Infantry.
121 Inspectors of Ordnance Machinery.
Armourers and Artificers.

Total forces, all ranks—

Cavalry	5,617
Artillery	13,399
R.E.	333
Infantry	53,682
R.A.M.C. (Officers) ...	332
A.O.C.	121
Total	73,484

The total strength in India is supposed to be kept up to 80,000.

The native army is, by the recent Army reorganisation scheme, to be increased, so that it may find the ordinary peace garrisons for Ceylon, Singapore, and other tropical stations, thereby freeing the European regiments at present quartered at these places. This will enable those regiments to be brought home, and will effect an increase in the strength of the home army.

Indian troops have been doing good service

for years in East and Central Africa, and recently a large force of all arms was employed in China.

It used to be laid down that the proportion of British to native troops should be at least one to three.

The policy of replacing British troops in important strategic positions by aliens, however loyal these may be at present, is unsound theoretically, and has no justification in the practical experience of any ancient or modern state. It might turn out to be very much cheaper and simpler in the long run to retain British troops, if necessary at twice their present cost.

The native army consists of—

40 Regiments of Cavalry.
133 Battalions of Infantry.
12 Mountain Batteries.
1 Garrison Company R.A.
21 Companies Sappers and Miners.
1 Submarine Mining Company.

A total strength (including the Hyderabad contingent) of about 150,000.

The constitution of the native army was based on the recommendation of the Royal Commission of 1859 (after the Mutiny), "that the native army should be composed of different nationalities and castes, and, as a general rule, mixed promiscuously through each regiment." After the Mutiny, class troops and companies were introduced; but recently regiments organised in class companies have been reorganised into class regiments.

The Volunteers (Europeans and Eurasians) date from 1860, and consist of cavalry, artillery, mounted rifles, rifle regiments, and naval corps. They have more than once been called out for active service. Their total strength amounts to about 30,000. They did very good service in South Africa.

The Military Police, which are quite distinct from the ordinary police force employed throughout India, was raised chiefly for service in Burma under officers of the Indian Staff Corps. In 1891 the Burma Military Police were 16,000 strong, 3,000 in Assam, and 450 in Chittagong.

The Hyderabad Contingent consists of 5,000 infantry, 2,000 cavalry, and four field batteries, and is commanded by officers of the Indian Staff Corps. It can be employed in any manner the British Government may direct, but two battalions must always remain near the capital city of Hyderabad.

Imperial Service troops were established in 1889, the idea being that native rulers should co-operate in Imperial defence by furnishing a quota of troops organised and equipped, with a view to their being able in time of war to take their place alongside the British forces. The troops are paid by, and are entirely under the control of, their own rulers, but are inspected periodically by British officers to see that their training is properly carried out. The total numbers amount to 10,000 cavalry and 11,000 infantry.

Reserves.—In 1886-7 steps were taken to form a

Reserve for the native army of India by allowing a certain number of men to be transferred to the Reserve after not less than five or more than twelve years' service. A Garrison Reserve was also to be formed of men who had been pensioned after twenty-one years' service. The Active Reserve to be embodied for one month every year, and the Garrison Reserve one month every alternate year. It is hoped that the numbers will soon reach 30,000 to 40,000.

The pay of an infantry soldier is seven rupees a month, and of a cavalry soldier thirty-one rupees. Subject to certain restrictions, a man may claim his discharge after three years' service; after twenty-one years' service he becomes entitled to a pension. Enlistments are made to include service beyond sea.

The officers of the Indian Army were by Royal Warrant, 1891, amalgamated with the Indian Staff Corps, and are eligible for employment in any of the three Presidencies, although an officer usually remains throughout his service in the same Presidency. There are ten officers attached to each native cavalry regiment, and nine to each native infantry battalion. The other Staff Corps officers are employed in staff, departmental, commissariat, or remount duties, or are in civil employ as commissioners, etc.

The native infantry regiments are now linked in threes, so that in the event of war the men may be transferred from one regiment to another. The Gurkhas in Bengal are linked together, and those in the Punjab likewise.

The mobilisation scheme of the Indian Army is based on the same principles as that for the Home Army; but the army in India is practically always ready to take the field. For its numbers it is one of the most efficient armies in the world.

The Military System of India.

As the administration of the army in India is based on a very elaborately worked-out system, a short account of the chief features cannot but be instructive.

The Viceroy in Council is the supreme head of the army in India.

Next to the Viceroy comes a military officer, who is a member of Council, and is in charge of the Military Department of the Government of India.

The Military Department of the Government of India is the ministerial agency through which the authority of the Viceroy in Council is administered.

The Secretary to the Military Department is, then, ministerial agent and departmental head, and is responsible for all military business that comes to the department. Although he is under the Military Member of Council, he has the power of expressing his views on any military question to the Viceroy independently of the Military Member of Council.

The work of the Military Department is divided under four heads—

(1) Military.
(2) Administration.
(3) Military Works.
(4) Finance.

The Commander-in-Chief, as the chief executive military authority, is the immediate subordinate of the Viceroy in Council. He is also a member of the Council, and is responsible for the command and general efficiency of the administration of the army. All proposals made by him involving changes of organisation or other important matters must be submitted for the consideration of the Military Department, and if of sufficient importance are subsequently laid before the Viceroy in Council.

The Adjutant General's department is divided into—

(1) General Branch.
(2) Inspector General of Cavalry.
(3) Inspector General of Artillery.
(4) Judge Advocate General.
(5) Director of Military Education.
(6) Principal Veterinary Officer.

The Quartermaster General's Department is divided into—

(1) General Branch.
(2) Mobilisation Branch.
(3) Intelligence Branch.

The Defence Committee of India is composed of—

President—
The Commander-in-Chief.

Members—
The Adjutant General.
The Quartermaster General.
The Director General of Military Works.

The Director General of Ordnance.
The Director General of Artillery.
The Assistant Quartermaster General (Intelligence Branch).

Additional Members for Coast Defence—
Director Royal Indian Marine.
Inspector of Submarine Defences.

COMMANDS.

The army of India is distributed into four commands, viz.—

Punjab.
Bengal.
Bombay.
Madras.

These commands are under lieutenant-generals, who are under the direct command of the Commander-in-Chief and the control of the Government of India.

Each of these commands comprises a certain number of first and second class district commands.

All purely departmental matters that require reference to the Commander-in-Chief are submitted to him by the head of the department concerned. When the Commander-in-Chief's instructions are received they are sent to the head of the department with the command from which it originated, who, under the orders of the lieutenant-general commanding, gives effect to the instructions received.

There is a controller of military accounts

with each command, who is the financial adviser to the lieutenant-general commanding, as well as to the Government of India. The controller is under the orders of the lieutenant-general for discipline only.

All important matters which affect more than one command are submitted by lieutenant-generals to the Commander-in-Chief. Other matters of purely local concern, but which require to be submitted to the Government of India, are submitted direct to the Government by lieutenant-generals.

The heads of departments with the lieutenant-generals commanding communicate with the heads of their departments, with the Government of India, or with the Commander-in-Chief.

FINANCE.

The Government of India is the final sanctioning authority for all expenditure in India. The Commander-in-Chief, when practicable, discusses the Budget personally with the Military Member of Council.

To diminish references to the Government of India on unimportant matters, the Commander-in-Chief in India may sanction expenditure unprovided for by regulations up to 10,000 rupees in any one month.

Lieutenant-generals commanding, up to 2,500 rupees in any one month.

The controllers of military accounts, not exceeding 1,000 rupees in any one month.

Provided that—

1. No permanent alteration of existing rules is involved.
2. That the amount is non-recurring.
3. That there is nothing irregular in the expenditure.
4. That the charges have been previously recognised and confirmed by superior authority.
5. That the amount can be met from the sum provided in the Budget under the head of the grant affected.

The controllers keep a check on the amount spent, and advise lieutenant-generals on matters involving expenditure.

Ordnance Department.

The Director General of Ordnance is the official adviser of the Government of India and of the Commander-in-Chief on all matters of equipment and supply of stores, the providing and issuing of munitions of war for the Army, the Volunteer force, and the Navy.

There are ordnance factories at the following places:—

Small Arms Ammunition—Dum Dum and Kirkee.

Gunpowder—Kirkee and Ishapur.

Gun-carriages—Fatehgarh, Bombay, and Madras.

Harness and Saddlery—Cawnpore.

Foundry and Shell Factory—Cossipore.

The Director General of Military Works is the head of the Military Works Department in

India, and besides being responsible for all matters connected with his department, he is on the Staff of the Army for all business relating to the Corps of Royal Engineers. In each command there is an officer of the Military Works Department, who is the chief or superintending engineer of the command, and subject to the orders of the Director General of Military Works; he is responsible for the construction and maintenance of coast, frontier, and inland defences, dockyards, arsenals, manufacturing establishments, buildings, and for all other military works in the command.

Commissariat-Transport Department.

The Commissary General-in-Chief is the head of the Commissariat-Transport Department in India. He is the adviser of the Government of India and of the Commander-in-Chief on all matters connected with his department. He recommends to the Commander-in-Chief such transfers of stores, transport animals, equipment, etc., from one command to another as he considers desirable.

As head of his department he can issue such orders direct to commissary generals and call for such reports as he thinks necessary. The commissary generals are on the departmental staffs of lieutenant-generals commanding.

Army Remount Department.

The Director of the Army Remount Department is the head of the Army Remount Department in India. He is the adviser of the

Government of India and of the Commander-in-Chief—

1. In all matters connected with the distribution of remounts.
2. As to the transfer of horses from one command to another.
3. He inquires into cases where the castings are unusually high or the requisitions for remounts apparently excessive.
4. He submits the numbers of remounts annually required to be purchased.

Medical Department.

The Principal Medical Officer of H.M. forces in India is the Staff officer of the Commander-in-Chief for the Military Medical Department of the Army in India, and is his responsible adviser on all points connected with the health, the sanitary arrangements, and the medical institutions of the troops. He also advises the Government of India on matters connected with his department. He distributes the administrative and executive officers of the Medical Department to the various commands.

There is also a principal medical officer to each command, who, under the orders of the lieutenant-general commanding, arranges for the postings of officers, etc., to—

(*a*) Administrative medical charge of districts.

(*b*) Medical charge and subordinate medical

charge of the station hospitals in the plains and in the hills.

(c) Medical charge of native regiments and of detached wings.

All questions of medical supply are under the Medical Store Department.

Military Education.

The Director of Military Education in India is the Staff officer of the Commander-in-Chief in India, and his adviser on all matters connected with the military education or examination of officers, warrant officers, non-commissioned officers and men, and with the British Army Schools in India.

Army Veterinary Department.

The Principal Veterinary Officer in India is the Staff officer of the Commander-in-Chief, and his adviser in all matters connected with his department. With the approval of the Commander-in-Chief he distributes the administrative and executive veterinary officers and subordinates to the different commands, and in conjunction with lieutenant-generals commanding arranges for all transfers.

In each command the lieutenant-general has an inspecting veterinary officer on his staff who is responsible for the veterinary service, and is under the orders of the lieutenant-general commanding; but in all professional matters he is subject only to the authority of the Principal Veterinary Officer in India.

CHAPTER XII.

COLONIAL CORPS.

BEFORE the reduction of the Army under Mr Cardwell's scheme in 1870 there were several Colonial corps—the Cape Mounted Rifles, Canadian Rifles, Ceylon Rifles, etc. These corps formed part of the standing Army, and, although the men were recruited locally, the officers were appointed in the same way as officers of Regular regiments, and could exchange with them.

These regiments and corps were all disbanded in 1870, except the West India Regiment and what is now known as the Royal Malta Artillery. The tendency of later years has been to increase the number of Colonial corps; but, as they have been raised at different times and as their services were required, they are serving under various regulations. Some regiments form part of the standing Army and are under the War Office, others are under the Colonial Office, and others under the Foreign Office. In these corps the officers and men are paid by the Imperial Government, and they must not be confused with those regiments that are raised, paid, and equipped by Colonial Governments, and which sometimes have a few officers lent to them by the Imperial authority, but who are paid by the local Colonial Government.

The West India Regiment.

The West India Regiment is composed of three battalions, two of which are serving in the West Indies, and one on the West Coast of Africa. The regimental depôt is at Jamaica. The service is trying, and officers are allowed to enter at a later age than they can in the regular Army. The men are enlisted chiefly in the West Indies, and must be of good physique. There is a certain number of European non-commissioned officers obtained as volunteers from Line regiments.

The Royal Malta Artillery.

This regiment, recruited in Malta, the officers also being natives of the island, serves continuously at Malta. The regiment has recently seen service in Egypt.

The Hong Kong Regiment.

This regiment is composed of natives of India enlisted for service at Hong Kong. There are a few European officers, who belong to the Indian Staff Corps, and a certain number of native Indian officers.

The Central Africa Regiment.

This is a local corps of two battalions, composed of natives; the officers are drawn partly from Regular regiments, partly from the Indian Staff Corps, and partly from the Militia.

The West African Regiment.

Another local corps, raised from natives, and officered in much the same way as the Central Africa Regiment.

The Chinese Regiment of Infantry.

This regiment is composed of natives of China enlisted for service at Wei-hai-Wei. The officers are obtained from the regular Army or Indian Staff Corps.

Royal Artillery.

The following local Colonial units form part of the Royal Artillery:—

The Sierra Leone Detachment.
The Hong Kong-Singapore Battalion.
The Ceylon-Mauritius Battalion.
The Sierra Leone Company.
The Jamaica Company.
The St. Lucia Company.

Royal Engineers.

The following local Colonial units form part of the Royal Engineers:—

Singapore Submarine Mining Company.
Hong Kong Submarine Mining Company.
Ceylon Submarine Mining Company.
Mauritius Submarine Mining Company.
West India Submarine Mining Company.
Sierra Leone Fortress Company.
West India Fortress Company.

These corps are all under War Office control, and form part of the standing Army. In addition to the officers, these units have a certain number of European non-commissioned officers.

The following corps are under the Colonial or Foreign Office. The officers are obtained chiefly from the Militia, with a few Regulars:—

East Africa Rifles.
Gold Coast Constabulary.
Lagos Constabulary.
Malay State Guides.
West African Frontier Force.
Sierra Leone Frontier Police.
Uganda Rifles.

In addition to the above, there is at the present time (October, 1901) a large number of locally raised Colonial forces serving in South Africa, and also a large number of regiments and corps lent by different Colonial Governments to the Imperial Government for the campaign.

According to old records there used to be what were termed "condemned" or "banished" regiments of white troops stationed permanently on the West Coast of Africa. Men in the Regulars who were convicted of desertion and other serious military offences were sentenced by courts martial to serve in these regiments for life. The mortality was enormous.

CHAPTER XIII.

YEOMANRY.

THE history of the Yeomanry dates from the end of the eighteenth century. It was first enrolled in 1761, and reorganised in 1793 on the volunteer system of that period. It has done excellent service on many occasions, and at one period it numbered 40,000. After 1815

its numbers decreased rapidly, but a fresh start was made after the sitting of the Committee of 1875. In 1888 an Act was passed whereby the Yeomanry could be called out for actual military service in any part of Great Britain.

The Yeomanry was organised into squadrons, the maximum establishment being 100, and the minimum 70. Two or three regiments were formed into a brigade, of which there were eighteen, and one separate corps, the Pembroke Yeomanry, of two squadrons. There was one adjutant per brigade. Regiments forming a brigade were required to train together as a brigade at least once in every three years. The annual training lasted for six consecutive days. Every yeoman had to ride his own horse or to satisfy his commanding officer that his horse was available whenever required. Yeomen received pay, and in addition the Government granted a contingent allowance for every "efficient," corresponding to the capitation allowance for Volunteers. The Yeomanry were equipped with carbine and sword, and were trained as cavalry, and not as mounted infantry. There was no fixed period of service; a yeoman, like a volunteer, could resign by giving a notice, as agreed to by him on joining.

By a Warrant issued in 1901 the Yeomanry has been completely reorganised, and the establishment greatly increased. They are now called "The Imperial Yeomanry," in recognition of the services done by Imperial Yeomen in the South African Campaign. The brigade organi-

sation has been done away with, and regiments reintroduced. Each regiment is to consist of four squadrons and a machine-gun section, with an establishment of—

Officers	28
Other ranks	585

If a regiment for two consecutive trainings falls below 420 efficients, or a squadron below 100, it is liable to be disbanded.

The annual training in camp is to be for not less than fourteen days, exclusive of the days taken up in marching to and from the camp. In addition to the period spent in camp, a certain number of mounted or dismounted drills has to be done, and also a prescribed course of musketry completed.

The pay and allowances are liberal. A private yeoman receives, while on duty, 5s. 6d. a day, besides forage and travelling allowances, and £5 horse allowance for the annual training. A capitation grant of from £3 to £1 a year per officer and man is also given, which goes to a regimental fund, out of which the men's uniform and equipment is paid for. Arms and saddlery are found by Government. A grant of £20 a year is given to each regiment towards the provision of a store room.

The Imperial Yeomanry are to be armed with rifles and clothed in khaki, Bedford cord pantaloons, brown gaiters, felt hat, and hunting spurs.

After October 31st, 1901, all Volunteer light horse and *Volunteer companies of mounted

* It is unlikely that this order will be carried out.—THE ED.

infantry are to be merged into squadrons of Imperial Yeomanry or disbanded.

The strength of the Yeomanry serving on January 1st, 1901, exclusive of the Imperial Yeomanry in South Africa, was 9,468. This is very nearly what the average strength has been during the last ten years. The establishment has now been raised to 35,000.

CHAPTER XIV.

THE MILITIA.

THE formation of a Militia for the defence of the United Kingdom dates from the reign of Edward I., when every man between the ages of fifteen and sixty was bound to serve, by the Statute of Winchester, 13 Ed. I., c. 6, which was based on the institutions of Henry II., and indeed of the Anglo-Saxon kings. Its object is to maintain a trained body of men, who can be embodied by Proclamation, and who thus become practically part of the regular Army, with this exception: that, unless they volunteer individually or by units, they can only be employed in the United Kingdom, the Channel Islands, and the Isle of Man. In 1662 owners of property had to furnish a quota of men for the Militia. In 1715 Militia regiments were raised in Ireland, but not in Scotland until 1797.

In 1757 the Militia was reorganised, and instead of owners of property being obliged to produce a

certain quota of men, this obligation was now placed upon counties. The numbers were obtained by ballot (paid substitutes being allowed), the term of service was for three years, and the limits of age eighteen to fifty years. In 1792 the Militia was embodied, and men were not allowed to enlist from the Militia into the Regulars. This interfered greatly with recruiting, as a man who might have enlisted in the Army preferred to go as a "paid substitute" into the Militia. Acts were soon passed to enable militiamen to enter the regular Army, and in 1799 a bounty of ten guineas was given, and the period of service was fixed at five years *or* to the end of the war. In 1805 a Militia regiment was attached to each regiment of the Line to act as feeder to it. A bounty and a small increase of pay were the inducements held out to men to join the Regulars. So well did this plan succeed that in one year alone 27,000 joined the Regulars from the Militia.

When England was threatened by Napoleon with invasion in 1803, "independent of the Militia, 80,000 strong, which were called out on the 25th March, 1803, and the regular Army of 130,000 already voted, the House of Commons, on 28th June, 1803, agreed to the very unusual step of raising 50,000 men additional by conscription in the proportion of 34,000 for England, 10,000 for Ireland, and 6,000 for Scotland; which it was calculated would raise the regular troops in Great Britain to 112,000 men, exclusive of the troops in the Colonies, besides a large

surplus for offensive operations. In addition to this a Bill was brought in shortly afterwards to enable the King to call on the levy *en masse* to repel the invasion of the enemy, and empowering the lord-lieutenants of the several counties to enrol all the men in the kingdom, between seventeen and fifty-five years of age, in different classes, who were to be divided into regiments according to their several ages and professions. But all persons were to be exempt from this conscription who were members of any Volunteer corps approved of by his Majesty; and such was the general zeal and enthusiasm that in a few weeks 300,000 men were enrolled, armed, and disciplined in different parts of the kingdom, and the compulsory conscription fell to the ground." *

In 1808 a local Militia, with an establishment of 300,000 men, was organised to serve in Great Britain only, as a supplement to the general Militia which was then embodied. The local Militia was to be raised by ballot from amongst men of from eighteen to thirty years of age. The numbers to be found by each county were fixed by Parliament, the period of service was for four years, substitutes were not allowed; but a small bounty of two guineas was given to men who enlisted voluntarily, and this brought a good number. Any person chosen by ballot for the local Militia was given the option of serving instead as an efficient in a Volunteer corps. A large number of men availed

* Alison's "Europe," vol. v., p. 296.

themselves of this alternative, and in 1812 there were 69,000 men so serving.

At this period paid substitutes were allowed for the general Militia, and in 1810 as much as £60 was paid for a substitute.

The general Militia did good work during the Peninsular War, garrisoning the United Kingdom, besides sending 100,000 recruits to the regular Army. In 1813 three strong Militia battalions joined the army under the Duke of Wellington. A large proportion of the soldiers who won the battle of Waterloo came direct from the Militia.

In 1816 the local Militia was disembodied. In 1829 an Act was passed to suspend the ballot for the Militia, and from this date until 1852 the Militia was allowed to dwindle away. Regiments were never called out even for an annual training, and by 1852 no one was left except the permanent staff.

In 1852 the Militia was reorganised in England, and was composed, as it now is, wholly of voluntarily enlisted men. In 1854 this system was extended to Scotland and Ireland. So successful was it that in 1856 30,000 men passed from the Militia into the Army.

In 1871 the command of the Militia was transferred from the lords lieutenant of counties to the Crown. By the Localisation of the Forces Act of 1872 the Militia was brought into a closer connection with the regular Army than had even been the case in 1805, and the Militia regiments were thenceforward numbered

as battalions of the county regiments. The training of both officers and men has from that date been much more carefully attended to.

The Militia is composed of—

The Lancashire Field Artillery.
Garrison Artillery, 32 corps.
Line Battalions, 128.
R.E. Fortress Companies, 11.
R.E. Submarine Miners, 8 divisions.
Medical Staff Corps, 8 companies.

The total establishment of the Militia on January 1st, 1901, was 124,252, and the enrolled strength at the same date 92,741 (exclusive of 11,000 Militia reservists called out on permanent service with the Regular forces). It is satisfactory to note that out of this enrolled strength the numbers of the embodied Militia on July 1st, 1900, were 88,842. Many men were discharged as medically unfit, which would account for some of the deficiency; on the other hand, many men rejoined who had been absent from the annual trainings for years.

The numbers wanting to make up the establishment of the Militia have been increasing during the past five years, and as the 11,000 Militia reservists on active service in South Africa were borne as supernumeraries on the strength of their corps, the number actually wanting to complete the establishment of the Militia on January 1st, 1901, was 31,511. It seems, therefore, doubtful if the 1829 Act suspending the Ballot Act for the Militia was a judicious measure.

A reserve for the Militia is about to be formed composed of ex-soldiers and ex-militiamen. If men join this reserve it will be a great reinforcement for the Militia. At present the Militia has no reserve, for the so-called Militia Reserve is composed of militiamen who are bound to serve when required in the ranks of the regular Army, thereby leaving vacancies in the ranks of their Militia regiments, which at present are not easy to fill up. The new Militia Reserve is not to be liable for service out of the United Kingdom, and is only to be called out when the Militia is embodied. The present Militia Reserve is to be abolished, as it is no longer necessary owing to the formation of the Special Service Section of the Militia, whereby individual militiamen or units can volunteer for service abroad, either as Militia units or with the Regulars.

By a recent Warrant the bounties paid to militiamen have been increased. All militiamen—except recruits—on the completion of their annual training receive a bounty of £1 10s.; and if they have completed two trainings, or the equivalent of two trainings, they are to receive, in addition to the 30s. at the conclusion of the annual training—

£1 on October 1st.
£1 on December 1st.
£1 on February 1st.

For the non-training bounties the following are to be considered as the equivalent for one training:—

(1) 76 days' recruit drill.
(2) One month's embodied service.
(3) If attendance at training has been specially dispensed with.
(4) Absence from training duly certified by a medical officer.
(5) Previous Army service, if not less than two years.

The re-enlistment and re-engagement bounties of 30s. are now done away with.

On joining a militiaman receives a free kit; his uniform has to last six years, unless he is embodied, but his boots and necessaries are partly renewed annually, and at the end of each training he can take away with him one pair of boots, two shirts, and two pairs of socks. Recruits are now enlisted for six years, but they may be re-enlisted for further periods of four years at a time, until they attain the age of forty-five years. To induce men to re-enlist during the present emergency the old re-enlistment bounty (now done away with) of 30s. was increased to £5.

The great deficiency in the organisation of the Militia is the want of field artillery. There are plenty of Militia engineers, and the Imperial Yeomanry could furnish the necessary cavalry for the tactical units of divisions and army corps; but there is no field artillery available, except what is left over from the Regulars. Probably arrangements will soon be made to convert some of the Militia and Volunteer Garrison Artillery into field batteries. With its present organisa-

tion, the Militia, when acting alone as part of a field army, could not be formed into larger tactical units than infantry brigades. When embodied, the militiamen become practically part of the regular Army; they receive the same kit and pay, and are subject to the same regulations as Regulars.

CHAPTER XV.

VOLUNTEERS.

ALTHOUGH the present Volunteer force dates only from 1859, Volunteers were organised as long ago as 1758. The Volunteers of that period were free from liability to the ballot for the Militia; in 1808 men chosen by ballot for the local Militia could, instead of joining the Militia, serve as "efficients" in a Volunteer corps.

In 1802-3 the Volunteers were 463,000 strong, but by 1809 the numbers had fallen to 190,000. In 1860 the Volunteer force, re-raised in 1859, was 180,000 strong, and the first meeting of the National Rifle Association was held in July, 1860, at Wimbledon. The present establishment of the Volunteer force is 265,000, and the numbers by latest returns 230,785. These numbers will probably be considerably increased. The Volunteer force is composed of—

A few mounted men who are now to be absorbed in the Imperial Yeomanry.

Artillery (chiefly garrison).

Engineers.
Infantry (including cyclists and signallers).
Railway Staff Corps.
Medical Staff Corps.

The bulk of the Volunteer force is infantry. Some of the artillery corps are now being equipped as field artillery, and will soon become very serviceable. The Engineers, being enlisted among the tradesmen of the large manufacturing towns, contain many skilled workmen in their ranks.

The Railway Staff Corps is composed of men connected with the management of the large railway companies.

The Medical Staff Corps is very strong, and the officers are skilled civilian practitioners, thus forming a valuable reserve for the regular Army. Part of the Volunteer infantry is organised into thirty-three mobile brigades, which are allotted to form a portion of the field army for home defence; the remaining battalions are allotted for garrison duty. The drill training (practical and theoretical) is chiefly carried on in the evenings, a regular course being gone through during the year. Musketry is carried on on Saturday afternoons and other holidays. Regiments go into camp for a week's training (a longer period of two weeks is now authorised) once each year, and those forming the mobile brigades must train periodically as a brigade under their own brigadier.

Volunteers serve for no fixed period, but can resign on giving notice. On joining they usually

sign certain regimental rules, which renders them liable to have fines imposed by a magistrate for failing to become "efficient," etc. A volunteer receives no pay or uniform (unless called out on actual military service), but the annual capitation allowance of 35s., which he earns by becoming efficient, goes to a regimental fund which furnishes him with clothing and equipment. The Government supplies arms and ammunition.

Besides those actually serving, there are many men throughout the country who have been trained in the Volunteers. It would therefore be possible to collect, on an emergency, a great number of able-bodied men having some military training and experience in the use of firearms. The great difficulty is the supply of officers. As the expenses are considerable, officers are drawn chiefly from successful business or professional men, and therefore are, as a rule, very intelligent; but from the shortness of their training they lack the confidence in themselves which is essential in a military commander.

While in camp an allowance of 2s. a day is given to Volunteers, out of which, under regimental or brigade arrangements, the men's expenses for messing, etc., are paid. Tents and camp equipment are found by Government.

Under the new Army scheme certain Volunteer regiments are to be formed into brigades, and then allotted as part of the six army corps. These regiments receive an extra period of training with increased allowances.

CHAPTER XVI.

COLONIAL MILITARY FORCES.

SINCE 1862 all colonies—and especially the self-governing ones, Canada, Australia, New Zealand, and the Cape—have done much to organise local forces and provide defences for their coasts. At Esquimault, Thursday Island, King George's Sound, Hong Kong, Singapore, Colombo, Mauritius, and Cape Town the armaments were found by the Imperial Government, the work being carried out by the Colonial Governments. In most other cases—except the four "fortresses," Gibraltar; Malta, Bermuda, and Halifax, and the naval ports Trincomalee, Simon's Town, Sierra Leone, St. Helena, Port Royal, and St. Lucia—all expenses were guaranteed by the Colonial Governments, but the Imperial Government frequently helped by giving guns that were being replaced by others in the Service, and other articles of equipment.

The local forces in Canada are administered by a Minister of "Militia and Defence," and are commanded by an officer on the active list of the regular Army, who is appointed by the War Office for five years. The local forces are subdivided into—

(1) A small permanent corps of Cavalry, Artillery, and Infantry.

(2) The active Militia. By the Act of 1886 every male Canadian between the ages of eighteen and sixty is liable to service

in the Militia if sufficient numbers cannot be obtained by voluntary enlistment. The number is now fixed at 45,000, the term of service three years, and the annual training lasts from eight to sixteen days. The Militia receive pay whenever called out.

(3) The Militia Reserve, which consists of all men, except those serving in the above-mentioned branches and a few other exceptions, between the ages of eighteen and sixty. It is calculated that about 200,000 of this class would have been trained in the Regulars or active Militia.

With regard to Canadian help in the present war, it is interesting to quote the words used by Mr. Sanford Evans in his interesting work:*—

"Suppose a government with headquarters at Berlin should decide to raise an entirely new regiment, and should choose as its recruiting points Dublin, Edinburgh, London, Lyons, Paris, Cologne, Hamburg, Berlin, Dresden, Constantinople, Bagdad, and one other point still nearer the Persian Gulf; suppose this government had never attempted anything of the same kind before; suppose it had little in its stores except rifles and ammunition, and suppose it got the regiment of more than 600 men together, fully clothed and equipped and on shipboard, sailing

* "The Canadian Contingents and Canadian Imperialism: a Story and a Study." By W. Sanford Evans. (London: Unwin.)

out of the port of Hamburg, all within seventeen days of the time it first made up its mind to raise a regiment at all—well, it would congratulate itself. Yet, in terms of European and Asiatic geography, this was the achievement of the Canadian Government."

AUSTRALIA.

The Australian Colonies all have local forces, which are organised on much the same system, the forces in each colony being commanded by an officer of the regular Army. They are subdivided into—

(1) Permanent force.
(2) Militia.
(3) Militia Reserve.
(4) Volunteers (some partially paid).

NEW ZEALAND

has a small permanent force of paid Militia, the remainder of the force being Volunteers, but all males between seventeen and forty are liable to serve, and unmarried men up to fifty-five.

The Australian Colonies being now united and having a Federal Parliament, the various military forces, formerly maintained by each colony separately, are amalgamated as a federated Australian Army. At present this force numbers about 60,000, including men who have served in the ranks of the standing Army and are still in the prime of life. This force could be equipped and would be ready to take

the field in a few days, with a due proportion of mounted troops, artillery, engineers, Army Service Corps, and Army Medical Corps. Besides these 60,000 men, there is in the great Federation a very large reserve of high-class men in the prime of life, who have been trained in cadet corps.

Every public school has its cadet corps, so that a very large percentage of the Australian youths receive a thoroughly sound military training at the very time of life that they are never likely to forget it. In New South Wales alone it is estimated that there are 90,000 men now in the prime of life who have received this early military training.

By the new Federal Defence Bill all British male subjects between eighteen and sixty years of age, who have been resident in the colony for six months, are liable to compulsory service. It is estimated that nearly 1,000,000 men would be available for service under these conditions. The exemptions include members of parliament, judges, magistrates, ministers of religion, doctors, men employed in hospitals or asylums, and only sons of widows.

Any number of these forces can volunteer for foreign service when Great Britain is at war.

Cape of Good Hope.

The local forces at the Cape of Good Hope are organised into—

(1) Permanent troops (Mounted Rifles and Field Artillery).

(2) Military Police.
(3) Volunteers.
(4) Rifle Clubs.

Extra forces can be raised should a great emergency occur by the Burgher Acts of 1878 and 1884, which render every able-bodied man between the ages of eighteen to fifty liable to service, but it has never been found necessary to put these Acts into force.

The large number of excellent troops raised locally during the South African War shows what good fighting material is to be obtained in South Africa when required for service in the field.

West Indies and Other Colonies.

The more important islands have local forces, either Militia or Volunteers. The Gold Coast and Lagos have military Haussa police as well as permanent corps. The British South and East Africa Companies and North Borneo Company have local troops or military police. A small contingent of Indian troops is employed on the East Coast of Africa.

The recent war in South Africa has proved that large numbers of men of grand physique can be raised in the Colonies; that they are quite capable of taking their places alongside our Regular troops, whether as cavalry, artillery, or infantry; and further, that as scouts and mounted infantry, from their vocation and training as agriculturists and in other out-of-door work, they are distinctly ahead of our best Regular troops.

CHAPTER XVII.

THE MODERN ORGANISATION OF THE BRITISH ARMY.

UNDER the modern system armies are based on the population of the country, and the standard of physique in the Army may be taken as fairly representative of that of the whole country. With our voluntarily enlisted Army, it is probable that our standard has frequently been above that of the average young man of the age at which we obtain our recruits.

The aim of all nations is that their military system should make the most of the powers of their population. We think we do this best by the system of voluntary enlistment, calculating that every recruit we obtain under this system has more or less a taste for "soldiering," and feels he is possessed of a certain amount of nerve; whereas under the universal service system many men are forced into the Army to whom the military profession is most distasteful, and who are not possessed of the nerve requisite to make a useful soldier. The voluntary system is undoubtedly more expensive, but the country prefers to bear the cost to having compulsory service. The voluntary system becomes not only dangerous but most expensive when immature lads, or the physical and moral refuse of the community, are taken into the regular Army.

Up to the middle of the eighteenth century

regiments were called by the names of their colonels; about 1751 numbers were given, and in 1782 county titles were added. In 1872, under the Localisation of the Forces Act, single battalion Line regiments, *i.e.* from the 26th to the 109th (except the 60th and Rifle Brigade, which had four battalions each), were linked in pairs. The headquarters of each original double-battalion regiment and of the newly linked single battalions were established in the county whose title they bore, and were termed a brigade district, being numbered consecutively (quite irrespective of the original regimental numbers) from 1 to 70. In 1881, after a slight readjustment of the linking (especially as to the Highland regiments), the hitherto linked regiments were converted into territorial regiments of two battalions (the 79th had then only one battalion), and the old brigade districts were called regimental districts, and renumbered, those of the old two-battalion regiments getting back their regimental numbers, and the others receiving the number of the senior of the two original single-battalion regiments. The names of regiments were readjusted as far as possible in compliance with regimental feeling. The old facings were done away with, and white facings were to be worn by all English regiments, yellow by Scotch, green by Irish, and blue by Royal regiments. The territorial system gives no clue to the dates at which each battalion was formed; this might well be added to the "Army List." It is not

generally known that no fewer than seventy-eight foot regiments have had constant service for 140 years.

The Localisation of the Forces Act did not contemplate that Line battalions would be quartered at their regimental district headquarters, so the new barracks that were built in pursuance of this Act provided accommodation for about 250 men only, in addition to the permanent staff. It was suggested by the Committee that when both Line battalions were abroad one of the Militia battalions should be embodied; but this was never carried out, and when both Line battalions were abroad extra accommodation for a large increase to the strength of the depôt was provided by erecting temporary huts inside the barrack walls. This plan was soon abandoned, and a provisional battalion was formed of the details of those regiments that had both battalions abroad. In the details were included men who were medically unfit or too young to go abroad, those just about to be discharged, and invalids sent home from abroad. This system has been largely adopted during the present campaign, and there are now six provisional regiments of Cavalry composed of the reserve squadrons of the regiments in South Africa, and twelve provisional battalions of Infantry composed of the details of regiments both of whose battalions are abroad.

England is at present divided into ten district commands under general officers. Scotland

forms one district command; Ireland is subdivided into four, the four district commanders being under the orders of the general officer commanding the forces in Ireland, who is directly responsible to the Commander-in-Chief.

The district commands are designated as—The Scottish (Edinburgh), North Eastern (York), North Western (Chester), Eastern (Colchester), Western (Devonport), Southern (Portsmouth), Thames (Chatham), South Eastern (Dover), Home (London), Woolwich, Aldershot, Belfast, Dublin, Cork, and the Curragh. The Woolwich, Aldershot, and Curragh commands affect only the troops quartered at these stations or in the vicinity.

The other commands include troops quartered within a large territorial area. For instance, the North Western command includes the counties of Cumberland, Westmoreland, Lancashire, Cheshire, Shropshire, Staffordshire, Warwick, Worcester, Hereford, and the whole of North Wales. Besides the Regular troops quartered in this district, which usually consist of two field batteries and depôt Garrison Artillery, one section of the coast battalion Royal Engineers, three battalions of Infantry, a detachment of Army Service Corps, one company of Royal Army Medical Corps, and one company of the Army Ordnance Corps, there are fifteen regimental districts, eight regiments of Yeomanry, twenty-nine battalions of Militia (one Artillery and one Engineers), sixty-four corps or battalions of Volunteers, and the Army Reserve men belonging to the regiments whose

headquarters are at the regimental districts. The staff of this command is composed as follows:—

General and A.D.C.	
Asst. Adjutant General	1
Deputy Asst. Adjutant General ...	2
District Inspector of Musketry ...	1
Commanding Royal Artillery ...	1
Staff Captain Royal Artillery ...	1
Commanding Royal Engineers ...	1
Principal Medical Officer	1
Chief Ordnance Officer	1
District Paymaster	1
Recruiting Staff Officers	3

The size of the various territorial commands varies greatly, as does the number of troops quartered in them; but the above may be taken as an example of the staff deemed sufficient for the working of an important district.

These district commands include, as above stated, regimental districts. Of these there are in the United Kingdom sixty-seven, but as seven are double regimental districts there are actually only sixty. Each regimental district is commanded by a colonel, and forms the recruiting ground for the territorial regiment or regiments (for the seven double districts), the Militia, and the Volunteer battalions within its area. The location of these districts was fixed in 1872 on the principle that out of a male population of 100,000 it should be possible to raise a Militia battalion of 1,000 men. The duties of the commanding officer of these regimental districts are not heavy in times of peace; but on mobilisation,

especially at the large depôts, the work would be more than one man could do. The ordinary duties are to command the regimental depôt, to superintend the training of and inspect the Militia and Volunteer battalions of the territorial regiment, to direct the recruiting service, and command the reservists within the limits of his district under the general officer commanding.

The Royal Artillery and Royal Engineers have also a territorial connection. For the Royal Artillery the United Kingdom is subdivided into nine recruiting areas, grouped into three Artillery divisional areas, viz., the Eastern Division, with its headquarters at Dover, includes the counties of Kent, Sussex, Essex, Middlesex, Norfolk, and Suffolk; the Southern Division, with its headquarters at Portsmouth, includes Scotland, Ireland, the Isle of Wight, Hampshire, Dorsetshire, Shropshire, Staffordshire, Worcestershire, Warwickshire, Lancashire, Cheshire, and Carnarvonshire; the Western Division, with its headquarters at Devonport, includes the counties of Cornwall and Devonshire, Northumberland, Yorkshire, Durham, Lincolnshire, and all Wales except Carnarvonshire.

The territorial connection of the Royal Engineers is effected by the officer commanding Royal Engineers in each district superintending the recruiting for the corps in his district.

The Army Service Corps, the Royal Army Medical Corps, and the Departmental Corps have no territorial connection.

The Localisation Committee in their report

laid down that the test of a peace organisation must be its power (1) to place in the field immediately on the outbreak of war, in the highest state of efficiency, as large a force as is possible compatibly with the peace military expenditure; (2) to maintain that force throughout the continuance of hostilities undiminished in numbers and efficiency.

By our present organisation the home Army is really a kind of training school, having to train both its own recruits and those required by the Army abroad. It therefore cannot find the number of men "fit" for immediate service abroad that its establishment ought apparently to enable it to do. These numbers can now be supplied by the Army Reserve, and a further reinforcement, when required, can be provided by the Militia special service section. Under the present scheme it is proposed to form the home Army into six army corps (three permanently formed and three to be formed when required), but to make up this number Militia and Volunteers must be included. Except at Aldershot, the troops now stationed in any of the district commands do not form a tactical or administrative unit. The formation of the home Army into six army corps would necessitate a readjustment of commands, and of the quartering of the troops in those districts that were to be designated as army corps commands, but otherwise it would in no way affect territorial regimental districts or the present organisation of the different arms. For an army corps command

twenty-five Infantry battalions should be quartered in the territorial area, under three divisional, and six brigadier, generals. Thus the three army corps that are to be permanently organised will require—

3 Generals in command.
9 Divisional generals commanding divisions.
18 Brigadier generals commanding brigades.

And seventy-five battalions of Infantry.

With the recent increase in the Guards and in the Line, this number will under ordinary circumstances always be at home; but as it will represent very nearly the whole of the home Army, presumably the present ten district commanders will be absorbed in the army corps and divisional commands.

By our present organisation there are fifteen batteries of Field Artillery in an army corps. This number will probably be increased; but even then there will be plenty of batteries at home, as under normal conditions there should be 105 batteries of Field Artillery at home.

Each army corps requires two regiments of cavalry. As there are usually three regiments of Household Cavalry and sixteen regiments of Cavalry of the Line at home, there is plenty of cavalry.

Each Infantry division has one field company R.E., and in the army corps troops are included—

1 Field Company R.E.	1 Telegraph Division.
1 Pontoon Troop.	1 Balloon Section.
1 Field Park.	1 Railway Company.

Total six units.

Under normal conditions there are fifty-seven troops or companies R.E. at home. The engineer units for the three army corps can therefore be easily found.

The Army Service Corps companies with an army corps number twelve, viz.—

Brigade Supply Columns	6
Divisional Troops ditto	3
Corps Troops ditto	1
Supply Park	1
Field Battery	1
Total	12

As there are fifty-nine companies at home or at present in South Africa, there would be no difficulty about the A.S.C. units.

It will thus be seen that to make up the three permanent army corps no increase in the present strength of the troops at home would be necessary—only a readjustment in the quarters they occupy. For instance, if the Scottish command is to be converted into an army corps, there would require to be made a large increase in the number of troops quartered in Scotland, unless the corps is chiefly to be composed of Militia and Volunteers. Under normal circumstances the troops quartered in Scotland are—

Cavalry ...	1 regiment.
Artillery ...	1 company Garrison Artillery.
Engineers ...	3 sections Coast Battalion.
Infantry ...	3 battalions.
A.S. Corps ...	Detachment.

But in addition to these there are—

Regimental Districts	10
Militia Battalions (infantry)	13
Ditto (artillery)	5

And a large number of Volunteers, both artillery, engineers, and infantry.

The other three army corps, that are to be organised only periodically for training, would be formed of Regulars, Militia, and Volunteers. The Imperial Yeomanry could furnish the necessary cavalry, and some of the Militia or Volunteers the additional batteries of field artillery. There would also be plenty of Engineers, but not enough companies of the Army Service Corps.

CHAPTER XVIII.

THE COST OF THE ARMY.

ALTHOUGH the Army Estimates come to a large total, it will be seen by the table given that only about one-third of the whole goes for pay. The estimates for the year 1899-1900 are quoted first, as in them are included no war charges. The strength of the standing Army, exclusive of the troops serving in India (who are paid by the Indian Government), was fixed for that year at 184,853.

The next table gives the estimates for the year 1900-1901. In this table are given separately the cost of the permanent increase to the Army in R.E., new batteries R.A., Irish

Guards, and Line battalions. Next the temporary increase owing to the war in South Africa, including the cost of raising the reserve regiments of Cavalry and battalions of Infantry; and finally the extra expenses caused by the war itself in transport, provisions, clothing, etc., this column alone coming to half as much again as the normal year's estimate.

ABSTRACT OF ARMY ESTIMATES, 1899–1900.

	Votes. Nos.	1899–1900. *Gross Estimate. Total Numbers,* 184,853.
		£
Pay	1	7,703,000
Medical Establishment	2	307,100
Militia	3	586,600
Yeomanry	4	75,010
Volunteers	5	624,700
Transport and Remounts	6	813,300
Provisions and Forage	7	3,465,100
Clothing	8	1,503,300
Warlike Stores	9	2,939,000
Works	10	1,375,575
Education	11	178,200
Miscellaneous	12	69,800
War Office	13	251,600
		19,892,285
Non-effective Officers	14	1,948,264
,, ,, Men	15	1,793,035
Superannuation, etc.	16	183,749
		3,925,048
Grand Total		£23,817,333 *

* Exclusive of the Supplementary Estimate for war services. One farthing per head per day taxation with our population produces more than £14,000,000 per annum.

PRINCIPAL DIFFERENCES.

STATEMENT SHOWING THE AMOUNTS PROVIDED IN ARMY ESTIMATES, 1900-1901.

VOTE.	(a) Normal.	(b) Permanent Additions.	(c) Temporary Increases.	(d) War Services.	TOTAL.
	£	£	£	£	£
1. Pay, etc., of Army	6,870,000	516,000	700,000	7,114,000	15,200,000
2. Medical Services	313,700			241,300	555,000
3. Militia	571,000		1,317,000	400,000	2,288,000
4. Yeomanry Cavalry	75,000		69,000		144,000
5. Volunteer Corps	900,000		330,000		1,230,000
6. Transport and Remounts	820,000	160,000	230,000	8,790,000	10,000,000
7. Provisions, etc.	3,626,000	334,000	1,840,000	7,300,000	13,100,000
8. Clothing	1,230,000	165,000	492,000	2,793,000	4,680,000
9. Warlike and other Stores	2,500,000	750,000	750,000	4,000,000	8,000,000
10. Works, etc.	1,370,700		500,000	800,000	2,670,700
11. Educational	113,800				113,800
12. Miscellaneous	56,900			10,000	66,900
13. War Office	255,000			20,000	275,000
14. Non-effective Charges (Officers) ...	1,562,600			48,400	1,611,000
15. ,, ,, ,, (Men)	1,327,000			52,000	1,379,000
16. Superannuation, etc.	186,000				186,000
Total ... ... £	21,777,700	1,925,000	6,228,000	31,568,700	61,499,400

b) Comprises additions to R.A., R.E., Infantry, etc.

(*c*) Provides for Royal Reserve Battalions, embodiment of Militia for home defence, extended training of Yeomanry and Volunteers, provision of mobile guns, and regimental transport.

THE PAY OF OFFICERS AND OTHER SOLDIERS.

On joining the Army a subaltern receives a practically unfurnished bedroom, for which he receives a limited allowance of coal and gas or candles. He becomes a member of a well-equipped mess, which is comfortably furnished at the officers' expense, and there he has all his meals, servants being found by the regiment. His pay is only 5s. 3d. a day, and in many regiments he could not pay for his day's messing out of this amount. A great deal has been said and done "officially" about the cutting down of mess expenses; and in some regiments, which are the fortunate possessors of an officer who has a turn for "catering," the messes are both good and cheap, the total expenses for the day (*i.e.* breakfast, luncheon, and dinner) amounting to only 3s. 6d. In a regiment of this kind no one ever thinks of complaining of the "expenses of the Army." In other regiments the charges are twice this amount, and the chances are that the messing is not nearly so good. As the mess bill is an officer's chief *necessary* expense, and as low mess bills are merely a question of management, it would seem that the simplest way to settle that part of the problem would be to relieve officers altogether from the trouble of mess catering, and to put it into the hands of large civilian contractors, who should be under the control of generals commanding army corps or districts, the rate of messing to be fixed at a certain contract price. As contractors—who would undertake the catering

for several messes at the same time—could buy in the wholesale market, they could do the messing much cheaper than a single regiment could do it; so, if a single regiment can mess its officers for 3s. 6d. a day, a contractor in a large way of business ought to do it for 3s. Therefore, if a subaltern can live for 3s. a day and 6d. a day for beer, he will still have 1s. 9d. a day left, or 52s. 6d. in a thirty days' month. Out of this he has to pay 10s. to his servant and 16s. for his washing—total 26s. So he has 21s. 6d. left to pay his subscription towards mess papers, etc., and to buy tobacco. If therefore a lad's parents had only to provide him with an allowance to dress on and to pay for amusements, people could not say that desirable youths were kept out of the Army on the score of the expense of living in it.

The cost of living in the Army would be much less than the necessary expenses of a young barrister, solicitor, or medical man. In fact, a young subaltern would be far better off than any other young professional man in every way, and at one-third the cost for educational preparation, which is exceedingly low.

At present an officer has to provide his own furniture, and the regiment the furniture for the mess, including china and glass. This seems a cumbersome arrangement. Officers should have to find their own linen only, and the mess, plate and linen only. If officers' quarters were furnished by Government, the amount expended would soon be recovered by the saving in the smaller amount of baggage that would have to be con-

veyed every time a regiment moved. The loss in breakages to a mess is always heavy, and this would be saved considerably by not having to carry about china and glass.

The private soldier's pay seems small, but it must be remembered that it is a wage and very nearly "all found"—lodgings, food, fuel, light, cooking, hospital and medical attendance, and the greater part of his clothing, besides a "club" in the recreation room, reading room, and canteen.

The greater part of our recruits join as "lads," and when they have been six months in the Service they receive, after paying for all necessary expenses, including a fair allowance for additional clothing and underlinen (termed "necessaries"), between 5s. and 6s. a week. It is very doubtful if many "lads" in ordinary employment have that amount either to spend or to send to their parents, if they are working away from home, week by week throughout the year. Many well-meaning but (on this subject) ill-informed persons, with the best intentions, write piteous appeals to those in authority to allow the sons of people who are in distressed circumstances to be discharged from the Army to support their parents. If only they knew that the sons could well afford to send the greater part of the 5s. a week, and if they are serving in any of the departmental corps probably twice that amount, there would not be so many of these appeals, which are probably made more in the interests of a lazy lad who wants to get out of the Service than of his poor parents,

who would be quite satisfied if he sent them the amount he could well afford. Of course, he could only send his parents money, in any case, by practising an amount of self-restraint quite unusual among lads of his years.

The boys who are "special" enlistments are certainly better off than they would be, as a rule, in civil life in every way, but at the expense of the efficiency of the Army and at a ruinous cost at present to the nation. Two good soldiers are better than four useless soldiers, even if they cost three times as much per head.

A soldier's pay is raised when he becomes a non-commissioned officer, and some of the higher ranks of non-commissioned officers, especially in the departmental corps, are well paid, though not as well as men of the same responsibilities and character in civil life. But as a corporal in the Infantry only receives 1s. 8d. a day and a sergeant 2s. 4d., it is manifest that these ranks are not sufficiently well rewarded, in view of the responsible duties they have to perform compared with private soldiers. The private soldier, also, of good character who, declining the responsibilities of non-commissioned rank, elects to remain a private soldier and thus only receives 1d. a day (for good-conduct pay) more from his third till his seventh year of service than the lad with six months' service, is a badly paid man. Yet these soldiers are invaluable as a leaven of good influence among the lads, and the reservists of at least their age were the mainstay of the army in South Africa.

DAILY PAY OF OFFICERS.

RANK.	Household Cavalry.	Cavalry of the Line.	Horse Artillery.	Field, Garrison, and Mountain Artillery.	Armament Pay for Garrison Artillery.	Royal Engineers.		Foot Guards.		Infantry and East India Regiment.	Army Service Corps.	
						Ordinary Pay.	Engineer's Pay.	Regimental Pay.	Guards' Pay.		Ordinary Pay.	Corps Pay.
	£ s. d.	£ s. d.	£ s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	£ s. d.	s. d.	s. d.	s. d.
Lieutenant-Colonel	1 3 6	1 1 6	1 4 9	18 0	5 0	18 0	14 0	18 0	250 0 0	18 0	18 0	6 0
Major	15 6	15 0	18 6	16 0	3 6	16 0	9 0	13 7	170 0 0	13 7	13 7	5 4
Major after two years' service as such	18 0	17 0	...	...	...	...	...	16 0	170 0 0	16 0	16 0	5 4
Major appointed second in command of a regiment or battalion (in addition to pay as Major)	1 0	1 0	...	...	...	...	...	1 0	...	1 0	...	...
Captain	13 6	13 0	15 0	11 7	3 0	11 7	6 0	11 7	140 0 0	11 7	11 7	4 0
Captain having higher rank by brevet	15 6	15 0	17 0	13 7	3 0	13 7	6 0	13 7	140 0 0	13 7	13 7	4 0
Lieutenant	9 0	7 8	8 10	6 10	2 0	6 10	4 0	6 6	70 0 0	6 6	6 6	3 6
Lieutenant after seven years' service as such	...	...	9 10	7 10	2 0	7 10	4 0	7 6	70 0 0	7 6	7 6	3 6
Second Lieutenant	6 8	6 8	7 8	5 7	2 0 (after passing an examination)	5 7	2 0 4 0 (after passing an examination)	5 3	70 0 0	5 3	5 3	2 6
Brigade Adjutant, Cavalry Brigade, in addition to Regimental pay	5 0	5 0	...	...	...	...	...	...	Guards' Pay yearly. A Lieut.-Colonel not in command of a regiment receives £200 Guards' Pay.	...	...	..
Adjutant, in addition to pay as Captain	2 6	5 0	2 6	2 6	...	2 6	...	2 6		5 0	2 6	...
Adjutant, in addition to pay as Lieutenant or Second Lieut. ...	3 6	5 0	3 6	3 6	...	2 6	...	3 6	...	5 0	3	...
Assistant Adjutant for Musketry, in addition to pay as subaltern	1 8	3 0	...	...	...	...	...	1 8	...	3 0	...	...
Divisional Adjutant, in addition to pay as Captain or subaltern	...	...	2 6	2 6 (Field) 2 0 (Gunners)	...	...	...	...	...	...	...	...

QUARTERMASTERS' AND RIDING-MASTERS' DAILY RATE OF PAY.

	Infantry, including Guards.		*Field or Garrison Artillery, Engineers, Army Service Corps.*		*Cavalry (including Household) and Royal Horse Artillery.*	
	s.	d.	s.	d.	s.	d.
On first appointment	9	0	9	6	10	6
After 5 years' commissioned service	10	6	11	0	12	0
,, 10 ,, ,, ,,	12	0	12	6	13	6
,, 15 ,, ,, ,,	13	6	14	0	15	0
,, 20 ,, ,, ,,	15	0	15	6	16	6

Officers on the general, personal, and educational staff receive a considerably higher rate of pay than regimental officers, especially if the officers holding these appointments are of junior regimental rank. For instance, a captain doing regimental duty in the Infantry receives 11s. 7d. a day; if appointed brigade major he receives £1 1s. a day. A major, after two years' service as major, would be receiving 16s. a day; if appointed a deputy assistant adjutant general he would also receive £1 1s. a day. Thus the captain brigade major is the better paid man of the two by 4s. 5d. a day.

In addition to regimental pay, extra pay is issued under certain conditions laid down by Royal Warrant.

Command pay at 5s. a day is issued to the officer commanding a regimental district, a discharge depôt, a regiment of Foot Guards, or camp of instruction. Command pay at 3s. a day is issued to the officer commanding a regiment of Cavalry, battalion of Infantry

a lieutenant-colonel of Royal Artillery, Engineers, Army Service Corps, and for certain other smaller commands at the rate of from 2s. 6d. to 1s. 6d. a day.

Extra duty pay at rates varying from 5s. to 6d. a day is also issued to the officers acting as adjutants, assistant adjutants, adjutants and quartermasters, quartermasters, and riding masters, during vacancies, to wings, depôts, or detachments, on West Coast of Africa, to a mixed force on board ship, to special bodies of troops on active service, in the Army Service Corps, to camps of instruction, in the Militia.

Working pay at the rate of 4s. or 2s. 6d. a day is issued to officers engaged in superintending working parties.

In India pay is issued in rupees, and now that the rupee has fallen so much in value the pay is not nearly so good as it used to be, although the amounts are the same. Married officers in India must for climatic and educational reasons send their children home, and hence they lose heavily by the adverse rate of exchange.

In most colonies, except the Mediterranean, a small allowance is made to officers by the Colonial Governments.

A regular Colonial allowance is issued by the Imperial Government to officers serving at Ceylon, China, Hong Kong, Straits Settlements, Mauritius, St. Helena, West Coast of Africa, and South Africa.

A very great grievance in the Army is the system of stoppages for absolutely necessary expenses which crop up at every turn of a soldier's life, and which are deducted from the nominal pay to a degree always irritating and often ruinous. It is not long since a Cavalry soldier's pay, nominally 9d. clear daily, was more frequently 6d., and very often 2d., to pay for necessaries essential to the discharge of his duty or improvements in his uniform. Barrack-room damages are also a fertile cause of discontent, but Captain A. Lee, M.P., and others are agitating for the abolition of "stoppages'

CHAPTER XIX.

THE SUPPLY OF OFFICERS.

COMMISSIONS in the Guards, Cavalry, Infantry, and West India Regiment are given to—

(1) Cadets who have passed through a course of instruction at the Royal Military College, Sandhurst, or the Royal Military College, Kingston, Canada.

(2) To an officer of the Militia, Yeomanry, or Volunteers, to an officer of the local military forces of the Colonies, or to an officer of the Royal Malta Artillery.

(3) To a duly qualified candidate from a University.

(4) To a warrant officer or non-commissioned officer—provided that, unless promoted for distinguished service in the field, the candidate must, when selected—

(*a*) Have attained the rank of sergeant and be under twenty-six years of age.

(*b*) Have a first-class certificate of education.

(*c*) Have a clear regimental defaulter sheet.

(*d*) Be unmarried.

In the case of appointments to the Household Cavalry candidates are subject to the approval of the colonel in chief of the brigade, and in the Foot Guards to that of the commander in chief.

Candidates, besides having to pass educational examinations, have to produce certificates to show that they come from the class from which it is desirable that officers should be drawn, and that they are of good moral character. There are also certain limits as to age, a certain standard of physique; and those candidates who are successful at the educational examinations have to be passed fit for service at home and abroad by a military medical officer.

The officers of the Royal Artillery and Royal Engineers are educated either at the Royal Military Academy, Woolwich, or at the Royal Military College, Kingston, Canada. A few commissions in the Artillery are given to Artillery

Militia officers who pass the competitive examination.

Since the beginning of the present war the educational standards for entrance have been depreciated to a remarkable extent, with deplorable consequences to the *prestige* of the Army.

In the Army Service Corps commissions are given to—

(1) Officers of the regular Army or Marines with not less than one year's service.
(2) Militia officers.
(3) Cadets from the Royal Military Colleges, Sandhurst, or Kingston, Canada.
(4) Duly qualified University candidates.
(5) A warrant or non-commissioned officer.

Officers have to join the Army Service Corps for one year on probation, and if reported upon unfavourably are liable to be reverted to their former corps (if they belong to one) or retired altogether.

Royal Army Medical Corps.

Commissions in this corps are granted to candidates who, after having obtained certain diplomas and certificates, have been successful at the competitive examination held twice a year or have been nominated to a commission direct. They join as surgeons on probation, and before final appointment to the corps have to pass through a four months' course of instruction at the Army Medical School at Netley, and a two months' course at the depôt at Aldershot.

The Army Chaplain's Department.

The officers are clergymen, who are appointed by selection, and have to serve one year on probation.

The Army Ordnance Department and Corps.

Some of the officers belong permanently to the corps; others, with not less than four years' regimental service, are attached for a period of five years. These appointments are given to officers who have passed the ordnance course or the advanced class at the Ordnance College. An officer after five years' service must go back to his regiment or corps and do regimental duty for two years before being allowed to rejoin the Army Ordnance Department.

The Army Pay Department.

Officers with not less than five years' service join this department from regiments. After serving one year on probation they can, if reported upon favourably, either join the department permanently or remain for five years, being seconded in their regiments. In the latter case, under certain circumstances, they are liable to be recalled to their regiments.

The Army Veterinary Department.

Duly qualified veterinary surgeons are appointed by selection, and serve for six months on probation.

Military Mounted Police.

Officers are appointed from regiments by selection.

Military Prisons Department.

Officers, not below the rank of captain, are selected to act as governors of military prisons. They are seconded like staff officers, and are removed from their regiments on account of age, or if they do not voluntarily rejoin on becoming second in command, or after ten years' service as governor of a prison.

Gymnasia and Signalling.

Officers, non-commissioned officers, and men are trained at the Gymnasium and School of Signalling at Aldershot to act as instructors in gymnastics and signalling.

After certain periods of service all officers are given on retirement either a lump sum as a gratuity or an annual allowance as retired pay.

Officers of the Militia, Yeomanry, and Volunteers are appointed by selection only, with certain qualifications as to age and so forth.

Besides the officers actually serving, there is a large number of non-effective officers, made up of officers who, on retirement from the Army, have received a gratuity or retired pay. Up to certain limits of age, according to rank, these officers are placed in the Reserve of Officers and can be called up to serve on an emergency. After the age limit they can only be called up if they voluntarily offer their services. Officers who have left the Regulars with no gratuity and officers who have served in the auxiliary forces can, under certain regulations, voluntarily join the Reserve of Officers.

CHAPTER XX.

THE PROMOTION OF OFFICERS.

ALL promotions are made upon the recommendation of the Commander-in-Chief, with the approval of the Secretary of State for War.

Vacancies are filled up either by the absorption of a supernumerary or by the selection of a qualified officer.

The necessary qualifications are to have a certain amount of service and to have passed a professional examination, unless specially exempted.

A supernumerary or seconded officer is eligible for promotion just the same as if he were serving with his regiment or corps, provided he keeps himself efficient for duty.

Unless an officer is specially recommended by the Commander-in-Chief to the Secretary of State for War for distinguished service or for marked ability and gallantry in the field, he must pass the professional examinations fixed from time to time before he is promoted to a higher rank; but if an officer is prevented by active service or by other very special circumstances from presenting himself or preparing himself for examination, he may be provisionally promoted, subject to his passing the prescribed examination on the first available opportunity. Should he then fail to pass, his promotion will be cancelled, unless his services have been of such an exceptional character that the

Commander-in-Chief authorises his having one more trial.

When an officer misses promotion on account of his not having passed the necessary examination, and is therefore superseded by a junior, he is compelled to retire from the Service, unless within eighteen months of his supersession he passes the required examination. An extension of time is, however, given to officers who have been engaged on active service or who have been prevented by the exigencies of active service from having an opportunity to qualify.

A captain is not promoted to the rank of major unless he has at least six years' service.

A lieutenant who holds the appointment of adjutant may, when senior of his rank in his regiment or corps, be promoted to the rank of captain, provided he has at least nine years' service or has still two years to serve as adjutant.

A lieutenant in the Royal Engineers and Army Service Corps after eleven years' service may, even in the absence of a vacancy, be promoted to the rank of captain; and in the Royal Engineers a captain with twenty years' service may similarly be promoted to the rank of major.

A second lieutenant in the Artillery, Engineers, or Army Service Corps may be promoted to the rank of lieutenant after three years' service, even if there is not a vacancy.

Promotion to the rank of lieutenant-colonel

is conferred, by selection, on officers with at least two years' service as major.

Only full-pay service reckons towards an officer's promotion; but if placed upon half pay on account of ill-health caused by military service he may reckon one year's half-pay service towards promotion, or if placed upon half pay on reduction or on special promotion he may reckon two years of such service towards promotion.

A lieutenant taken prisoner of war may be promoted in the same manner as if he were doing duty. A captain who loses his promotion to the rank of major by being taken prisoner of war may be promoted subsequent to his release, and his promotion antedated, so that he suffers no loss of seniority.

In the case of officers promoted from the ranks, all service as a warrant officer and half the time served in any lower rank count as full-pay service towards promotion.

Half-pay Promotion.

A major, with two years' service in that rank, may be promoted to the rank of lieutenant-colonel on half pay.

A captain, with at least six years' service, may be promoted to the rank of major on half pay.

A lieutenant, with no limitation as to service, may be promoted captain on half pay.

Brevet Promotion.

For distinguished service in the field, or for distinguished service of an exceptional nature

other than in the field, a lieutenant-colonel may be promoted to the brevet rank of colonel, a major to that of lieutenant-colonel, and a captain after six years' service to that of major.

There is no such rank as a brevet captain, so a subaltern can receive no brevet promotion, but subalterns' names are noted for brevet promotion, when they attain the rank of captain.

A lieutenant-colonel is usually promoted brevet colonel on being appointed A.D.C. to the Sovereign, or after four years' service in command of a regiment, battalion, or other equivalent unit.

A lieutenant-colonel with three years' full pay service in that rank, or a brevet colonel selected for any appointment carrying the substantive rank of colonel, may be granted such substantive rank.

Promotion to General Officer.

An officer holding the substantive rank of colonel is eligible for promotion to the rank of major-general, provided he has not attained the age fixed for the compulsory retirement of a colonel, namely, 57.

No promotion is now made to the rank of major-general or lieutenant-general, except by selection to fill an appointment, or as a reward for distinguished service in the field or of an exceptional nature other than in the field.

Temporary or local rank as major-general, lieutenant-general, or general, may be con-

ferred on an officer of the next lowest rank, whether he holds that rank permanently or temporarily.

The rank of brigadier-general is local or temporary only, not permanent.

The honorary rank of major-general is sometimes conferred on a colonel who has held a temporary appointment as major-general. This rank does not confer any advantages as regards pay, retirement, or retired pay.

Field-Marshal.

An officer, without reference to seniority, is promoted to the rank of field-marshal at the will of the Sovereign. A general officer retired for age remains eligible for such promotion.

Exchanges.

Officers are permitted to exchange from one regiment or corps to another under certain regulations, which are issued from time to time. Under certain conditions officers of the Line below the substantive rank of major, and with less than fourteen years' service, are allowed to exchange with officers of the Indian Staff Corps.

General Regulations.

Subject to regulations, laid down from time to time, an officer of the Royal Artillery employed in the Indian Ordnance Department, or an officer of the Royal Engineers employed on other Indian services, may elect to render continuous service under the Government of India.

A major with the brevet rank of lieutenant-colonel can serve for three years after receiving his brevet rank before being retired for age should he have reached the age for being retired before that time.

A captain or major holding an appointment in the Egyptian Army is removed from his regiment and placed on half pay if he is continued in his appointment for more than seven years, and may be removed before that time.

An officer may be removed from the Army at any time for misconduct.

An officer is not allowed to remain in the Army unless, during the first three years of his service, it is shown that it is in every way desirable to keep him.

An officer who has not been guilty of misconduct may be called upon at any time by the Commander-in-Chief to retire from the Service, and be placed on half pay, or granted a retiring allowance.

An officer on half pay, who is fit for duty and does not serve when called upon, is liable to be removed from the Army.

Under certain circumstances, and when holding appointments such as second in command, adjutancies of auxiliary forces, etc., officers who have reached the age limit for retirement may be kept on, if specially recommended by the Commander-in-Chief and approved by the Secretary of State.

A lieutenant-colonel of a Cavalry regiment or an Infantry battalion may have the term of

his command extended for a period not exceeding two years.

A major-general, if holding an appointment when he attains the age of sixty-two, may be continued in the Service until he has completed the term of his appointment.

An officer shall not be retired for "non-employment" if he has held an appointment for not less than two years, otherwise after five years' non-employment he shall be retired.

The present ages at which retirement is compulsory are—

Lieutenant or Captain	45
Major	48
Lieutenant-Colonel	55
Colonel	57
Major-General	62
Lieutenant-General or General ...	67

CHAPTER XXI.

STAFF.

GENERAL officers commanding districts allot amongst their staff the several duties in such a manner as will best ensure their efficient performance. When there is more than one staff officer in a command, one will be named "chief staff officer."

The distribution of duties is as follows—

"A" DUTIES: Discipline, interior economy, drill, military training and instruction,

musketry, signalling, schools, charge of garrison and regimental institutes.

"B" DUTIES: Supply, transport, movements, distribution and quartering, barracks, camps, hire of buildings and lands for camps, ranges, etc.

"C" DUTIES: Artillery services.

"D" DUTIES: Engineer services.

"E" DUTIES: Ordnance services, viz., arms, ammunition, clothing, mobilisation, and other equipments.

"F" DUTIES: Medical services.

Officers of the general staff are appointed for "A" and "B" duties, the former being known as the adjutant general's and the latter as the quartermaster general's department. But these titles are no longer given to officers of these departments, except to those serving at the Headquarters Staff of the Army. "B" staff duties are usually done by officers of the Army Service Corps.

The artillery, engineer, medical, and ordnance services are under the officers commanding Royal Artillery (C.R.A.), district Royal Engineers (D.E.), principal medical officer (P.M.O.), and chief Ordnance officer (C.O.O.) respectively.

The military secretary, assistant military secretary, or assistant military secretary and aide-de-camp are the confidential staff officers of the general officers to whom they are attached. They are the channel of communication on all subjects connected with promotion and such other matters as do not come within the province

of the adjutant general's department. Where there is a staff officer for instruction he has, in addition to his general staff duties, to arrange for war games, lectures on military subjects, and to manage tactical societies.

Brigade majors, under the orders of the generals commanding their brigades, issue all orders for their brigades, keep the duty roster, etc., etc.

Aides-de-camp are personal staff, and are selected by general officers entitled to them.

The rules for the selection of officers to serve on the staff are as follows:—

Officers are to be selected exclusively from the Regular forces, including the Royal Marines, and must, unless special authority is obtained for their employment, have four years' service.

To be considered qualified for the appointment of D.A.A.G. or brigade major officers must hold a Staff College certificate or have been trained in the Army Service Corps, except those holding the rank of lieutenant-colonel and all officers of proved ability on the staff in the field.

An officer appointed aide-de-camp, unless he holds a Staff College certificate, must have qualified for promotion to the rank of captain, and have obtained a certificate of proficiency in riding. He will also be required to pass an examination in French. Until he has done this he will only be appointed provisionally.

When a regimental officer is employed on the personal staff of a general officer or civil governor of a colony, he will be required, on

the completion of his period of employment, to rejoin his regiment and do duty with it for two years before being again similarly employed. The term of an appointment on the general or personal staff is not to exceed five years, unless extended under special circumstances. On the personal staff of civil governors of colonies this period is extended to six years.

Brigade majors are now only appointed for three years. An officer under the rank of captain is not eligible to hold the post of brigade major.

An officer above the rank of substantive major is not eligible for the following appointments:—

Brigade Major.
District Inspector of Musketry.
Staff Captain.
Aide-de-camp (except to an officer commanding in chief).
Instructor in an educational establishment. (The appointment of professor is open to officers of all ranks.)

A brevet colonel can hold any staff appointment that may be held by an officer of his substantive rank.

Officers holding staff appointments at home or in the Colonies, unless seconded, or unless they are substantive majors who have been replaced by additional captains, are required, on their regiments being ordered to India or on active service in the field, to relinquish their appointments in order to accompany their regiments. Officers on the staff in India (unless

seconded, or under special authority) are required to vacate their appointments on their regiments leaving that country.

An officer is seconded—

(*a*) In the case of the Royal Artillery on the Indian establishment, from the date of joining for the long course of instruction in gunnery or as a student at the Staff College.

(*b*) From the date of appointment to the general, personal, or educational staff, to the directing staff of the Army Ordnance Department, or to the Ordnance Factories.

(*c*) From the date of appointment to the adjutancy of a Cavalry brigade or depôt, or in the Militia (at home they are supernumerary), Yeomanry, or Volunteers, including Volunteer corps in India.

(*d*) From the date of completion of three months' service in any other extra-regimental employment, or with the Army Service Corps.

(*e*) From the date of application, if a member of the House of Commons.

(*f*) From the date of appointment or embarkation to take up a colonial, civil, or military appointment, or an appointment under a foreign Government.

(*g*) From the date of commencement of special extra-regimental employment

or of embarkation to take up such, or on appointment to the Hong Kong Regiment.

(*h*) From the date of commencing probationary service for the Indian Staff Corps.

By a recent order the tenure of the appointment of adjutant is now to be for three years only, both in Regulars and auxiliary forces. In the Regulars this period may be extended by six months. In the auxiliary forces the term may be extended by two years, but the appointment must be given up on promotion to the rank of substantive major.

CHAPTER XXII.

ENLISTMENT AND DISCHARGE.

THE Recruiting Department has a duly organised staff. The Inspector General of Auxiliary Forces is the head of it; and besides him there are also the A.A.G. and the D.A.A.G. for Recruiting, at the War Office. Recruiting staff officers, Classes I. and II., are attached to the staff of general officers commanding districts, and supervise the recruiting in the surrounding areas.

Officers commanding regimental districts supervise the recruiting done in their districts by the permanent staff of the auxiliary forces.

Advertisements are inserted in provincial

papers, and in many large towns there is a house or room at which all information as to pay, terms of service, and pensions can be obtained. Placards are posted up at railway stations and other public places, and latterly regiments have been sent to march through the counties to which they belong. The number of recruits raised in an average year is very considerable, amounting to about 100,000 men. Of these 55,000 would be obtained in almost equal numbers for the Regulars and Militia, and the remainder for the Volunteers. The bounty system, which was so long associated with voluntary enlistment, has been abolished for many years (although quite recently a bounty of £10 was offered to artificers who would enlist for a short period of Army service during the present war in South Africa for the Artillery and Cavalry, and to the Royal Reservists a bounty of £22 was paid). In 1804 the bounty was nineteen guineas, but it gradually decreased after 1815, until in 1858 it was £5. The standard of physique has varied considerably from time to time, being reduced when larger numbers of recruits were required. In 1802 it was 5 feet 7 inches, in 1813 it fell to 5 feet 3 inches, and for recruits of 17 years of age 5 feet. The present standard for the Line is 5 feet 3 inches, chest measurement 33 inches, and weight 8 st. 3 lb. The limits of age, except in the case of artificers, etc., is 18 to 25 years. Youths likely to develop are enlisted by "special" authority when under the authorised standard. There are a good

many recruits of this class—about 20 per cent. In 1813 men were enlisted up to the age of 40. In 1815 there were many lads in the ranks under 18.

A civilian becomes a soldier on being attested by a proper authority. These are recruiting staff officers, commanding officers of Royal Engineers, and the Assistant Commandant of the School of Military Engineering, Chatham, officers commanding regimental districts and the Rifle Depôt, Cavalry regiments, battalions of Infantry, brigade divisions R.A., and magistrates. Until quite recent years no one could attest a recruit except a civilian magistrate, an officer who was also a J.P. could not attest a recruit. This was a relic of the old times when the Army was looked upon with suspicion by the civil government. The proceedings on attestation consist in the recruit being asked certain questions as to his place of birth, former trade or calling, age, etc. If the answers appear satisfactory, and if the officer or magistrate is satisfied that, as far as he can see, there is nothing to render the man an undesirable recruit, the man is required to verify his answers by signing the attestation paper. The oath of allegiance is then administered to him, the officer or magistrate signs the attestation paper, and the man is then said to be attested and to have become a soldier. Before the man appears to be attested he is served with a notice paper, which shows him the questions he will be called upon to answer, as after he has become a

soldier he is liable to trial for giving a false answer to certain questions put to him on attestation. After being attested the recruit is sent for a second examination by the medical officer, and he is then sent as follows to do his recruit's preliminary training:—

Cavalry—to headquarters of regiments.
Royal Artillery—to one of the depôts.
Royal Engineers — to Aldershot or Chatham.
Foot Guards—to headquarters of regiment.
Infantry—to regimental depôt.
Army Service Corps—to Aldershot.
R.A.M. Corps—to Aldershot.
Army Ordnance Corps—to Woolwich.

By the present law all enlistments are for twelve years. Instructions are issued by the Secretary of State for War as to how much of this period is to be spent in Army service, so that a man on enlistment knows how many years, unless exceptional circumstances arise, he will be called upon to serve "with the colours." In some few corps, such as the Household Cavalry, the whole period of twelve years is passed in Army service. In other cases, such as the Railway and Post Office Reserves, the whole period is usually passed in the Reserve, unless called out for active service. The ordinary periods of service at present are seven years' Army service and five Reserve, or three years' Army service and nine Reserve. But the Secretary of State can vary the conditions of

service so as to enable a man to enter the Reserve before the usual time, to return to Army service from the Reserve, or to remain the whole twelve years in Army service. When a state of war exists, or the Reserves have been called out by Proclamation, or when serving beyond the seas, a soldier may be retained in Army service for a period of twelve months (if required so long) beyond the term of his original enlistment, or beyond the period at which he would under ordinary circumstances have been transferred to the Reserve. If the soldier wishes, he may continue in Army service, after the completion of one year more than his original term of enlistment, until the end of the war or for such period as he chooses, provided he gives three months' notice of his wish to leave to his commanding officer.

The soldier has the option, under certain regulations that are made from time to time, to make changes in the conditions of his service. Men who originally enlisted for three years Army service may extend their Army service up to seven years, and further to twelve years; men enlisted for seven years' Army service may extend their term to twelve years. Men are allowed to pass to the Reserve before the usual period, or to return to Army service from the Reserve. After nine years' service a soldier may be permitted to re-engage to complete a total period of twenty-one years' Army service from the date of his original enlistment. After twenty-one years a soldier may be allowed to continue in Army service for

any further period, claiming his discharge by giving three months' notice (or any reduced period) to his commanding officer. A non-commissioned officer above the rank of corporal has a right to re-engage if he chooses.

A soldier may purchase his discharge, and thus render himself free from all military obligations. During his Army service a soldier may be compulsorily transferred from one regiment or corps to another under the following circumstances: If enlisted for general service, within three months of the date of his attestation; when convicted of desertion or fraudulent enlistment, or when he confesses either of these offences and his trial is dispensed with; when he has been invalided from service beyond the seas; when he is ordered abroad and is found medically unfit, or is within two years of the expiration of his Army service; when he is serving abroad and, his corps being ordered home or to some other station, he has more than two years' Army service to do before transfer to the Reserve and he has not extended his Army service; on removal from the Corps of Armourers, Military Police, or other staff employment, or when sentenced by court-martial to six months' or more imprisonment.

The contract on enlistment is binding on the State and the soldier for the term stated, and the soldier can only be discharged, except with his own consent, before the expiration of his period of enlistment or re-engagement—

By the sentence of a court-martial.

By general officers commanding, for misconduct.

By a medical board, as unfit.

As not likely to become an efficient soldier.

When claimed by civil authorities for wife desertion.

When claimed as an apprentice.

When claimed by the civil power for any felony, misdemeanour, or for a debt over £30.

The term of Army service has varied frequently. In 1783 recruiting for general service was introduced, and was continued until 1816. The usual term then was for life, but it was frequently changed to two or three years or to the end of the then present war. In 1799 many men enlisted into the Regulars from the Militia for a bounty of ten guineas, the term being for five years or to the end of the war. Service was limited to Europe only. In 1806 short service was introduced, the term for Infantry was seven years, with the option of re-engaging for pension.

In 1808 life enlistments were again offered as an alternative. In 1829 short service enlistments were abolished, and life enlistments only were allowed. In 1847 life enlistments were abolished, and enlistments were made for a period of ten years, with the option of re-engaging for pension and a small increase of daily pay. In 1867 the term of enlistment was increased to twelve years; and in 1870 the present system of part Army and part Reserve service was introduced.

The Inspector General of Recruiting, in his

report for the year 1900 says: "Recruiting in the United Kingdom has improved during the year, except in Ireland; but, in spite of the war, recruiting for the Infantry has not met the demand."

During the year a grand total of 98,361 recruits was raised for the regular Army, made up as follows:—

Ordinary recruits	49,260
Imperial Yeomen and Volunteers	24,449
Royal Reservists	24,130
Ex-soldiers	522
Total	98,361

While dealing with the subject of recruiting, the following extract from the memoirs of Lieutenant Shipp, edited by Manners, of Chichester, is interesting:—

"Three experimental regiments were formed about 1797. The object of forming these experimental regiments, as they were called, was to relieve parishes of boys from the age of ten to sixteen, who were allowed to enlist, on the parish paying the expense of their journey to some recruiting depôt. Each of these regiments was composed of 1,000 boys, who made such excellent soldiers that it seems extraordinary no such plan was ever again adopted."

The boys of the Duke of York's School, in London, and the Royal Hibernian Military School, in Dublin, make excellent soldiers.

CHAPTER XXIII.

SUPPLY AND TRANSPORT SERVICES.

SUPPLIES.

THE general officer commanding is responsible for the efficient and economical performance of all supply and transport services in his command.

All supplies authorised to be obtained or executed locally will be provided by contract. The tenders will be opened on an appointed day by a staff officer in the presence of an officer of the Army Service Corps for general supplies, of an officer of the Army Ordnance Department for ordnance stores or clothing, of a medical officer for hospital supplies, and an officer of the Royal Engineers for engineer services.

The lowest tender is to be accepted, provided the general officer commanding is satisfied that the tenderer is a fit person, and that the price quoted is not unreasonable.

Security must be obtained when Government stores will be in possession of a contractor.

The general or other officer commanding at stations abroad will assist the naval authorities as much as possible in negotiating purchases for His Majesty's Navy.

Upon default of a contractor, supplies may be purchased locally, and the amount for them, if in excess of the contract price, recovered from the contractor.

When supplies are forwarded by inland

water or land carriage they will be given in charge of some trustworthy person as conductor.

When supplies are considered unfit for issue a board will be assembled to report on the cause.

Transport.

Where there is a naval officer he will provide all sea transport required for Army service. Where there is no naval officer a military officer is to be appointed as superintending transport officer, and he will make all arrangements for passages and freight for troops or stores.

When ships are hired for the conveyance of troops it should be stated upon the charter-party whether Government is to find provisions for the troops while on board or if this is to be done by the master. If they are found by Government, the master is responsible that they are issued in accordance with the Admiralty regulations, as he will have to account for all supplies handed to him before the freight is paid.

The date of arrival of a freight ship will be at once reported to the Director of Transports, Admiralty, and any particulars of serious injury to, or deficiencies of, stores.

An officer of the Army Service Corps will be appointed supply landing officer, and he will clear the stores from the wharf as quickly as possible. Ships should be discharged as rapidly as possible.

Officers in charge of transport are responsible for the executive duties in connection with Army Service Corps, auxiliary, hired, rail and

water transport, and for the transport animals, equipment, and stores.

On an emergency it may be necessary to cause explosives to be conveyed by rail under the Secretary of State's warrant, in which case the railway companies' bye-laws as to the carriage of explosives will not apply.

On receiving a requisition for the conveyance of regimental baggage, the officer in charge of transport will apply publicly for tenders.

In shipping stores, they should first be packed as closely as possible, so as to get the smallest measurement for tonnage, and the amount should be entered in the bill of lading.

Shippers are liable for losses or damage to Government stores arising—

(1) From working and leaking of ships (unless there is proof of improper stowage).
(2) From indifferent packages.
(3) From stormy weather, as it would be an underwriter's loss if the cargo was insured.

Shipowners are liable for losses and damages—

(1) From bursting or cracking of casks or cases caused by bad stowage.
(2) From wilful damage or depredation.

Where there is a naval transport officer the military authorities will load the stores at the piers or at high-water mark, under the supervision of the naval authorities; when the boats are loaded the Navy becomes responsible for their removal and for the trans-shipment of their loads to the vessels.

The Navy will unload and land the stores, provide the boats, barges, lighters, and tugs, and deliver the loads at high-water mark or at wharves or piers. The unloading of the stores from the barges, etc., is a military service.

Although the Navy is responsible for the removal of the stores to and from the ships, they are not accountable for the actual quantities put on board each barge, etc., and this must be looked after by the officer who has to receive the stores. He should send someone on board the vessel to take a list of the articles put on each lighter and to send him a copy by the person in charge of the lighter. The same precaution should be taken when shipping stores.

CHAPTER XXIV.

BARRACK SERVICES.

OFFICERS (Army Service Corps) in charge of barracks are responsible for all the duties connected with the receipt, custody, issue and accounts of water, fuel, light, palliasse straw, disinfectants, cleaning articles, furniture, barrack, prison, and hospital clothing, and other stores required for the use of troops in barracks, hospitals, and standing camps.

The custody of barracks and the duty of handing over the proper accommodation to troops rests with the officer in charge of barracks. The maintenance of the fabric of the

buildings, their repair, and any structural alterations rest with the Engineers.

Barracks and quarters when dismantled are in charge of the Engineers; if unoccupied but not dismantled, they are still in the custody of the officer in charge of barracks.

When accommodation is required in barracks, notification should be sent by the general or officer commanding to the officer in charge of barracks.

When troops relieve other troops in barracks, an officer to hand over and another to take over the barracks should attend at the same time with the officer in charge of barracks. New buildings, when reported by a board of officers as fit for occupation, will be handed over by the Engineers to the officer in charge of barracks, who will sign for the inventory of fixtures. He will also take over from the Engineers all lands and buildings hired for the use of troops and allotments of garden ground for troops.

Rifle ranges when not in use are in charge of the Engineers, who are to carry out all necessary repairs. When required for use they are handed over by the Engineers to the officer in charge of barracks, who allots them as arranged by the district inspector of musketry.

The officer in charge of barracks is responsible—

That all chimneys are swept regularly.

That the water supply is not wasted, that the water meters are tested, and that

any leakage is at once reported to the Engineers.

That the sanitary services are properly attended to, and that contractors carry out the emptying of cesspits, ashbins, etc., and that disinfectants are applied when necessary.

That the deliveries of fuel and light are made according to regulations.

That the rules are attended to as to the use of gas in barracks, that the gas-pipes and mains are examined quarterly and any defect reported to the Engineers.

In assessing barrack damages against troops they should be dealt with as leniently as possible, and every reasonable allowance should be made for fair wear and tear.

One-third of the value of all lamp globes and chimneys, unless wilfully damaged, are charged against the public.

Certain articles, like brooms, etc., can be exchanged when so worn out as to be unfit for further use.

When a fire-engine, employed under the authority of the general officer commanding to assist in extinguishing a fire on private premises, is damaged, the repairs should be made good by the person for whose benefit it was used. If the premises are insured, application should be made to the insurance company.

The officer in charge of barracks is responsible that the bedding in stores is kept in a

proper state of cleanliness and repair, and fit for immediate use.

During cold weather an extra blanket per man is issued.

Bedding is exchanged as follows:—

Blankets or rugs ...	12 months.
Palliasse and bolster cases (straw) ...	3 months.
Palliasse and bolster cases (coir fibre)	fortnightly.
Sheets...	fortnightly.

Hair for filling beds is allowed in hospitals, and the beds are re-made when necessary. When coir fibre is used, the beds should be re-made after being twelve months in use.

The washing of barrack and hospital bedding and clothing is carried out at Government laundries or by contract.

CHAPTER XXV.

ALLOWANCES.

PROVISIONS.

A SOLDIER is allowed a free ration daily. In barracks, 1 lb. bread and ¾ lb. fresh or preserved meat; under canvas, 1 lb. bread and 1 lb. meat. An officer is allowed a free ration abroad similar to the men—1 lb. bread and 1 lb. fresh or ¾lb. preserved meat.

A soldier's wife abroad receives half a ration, and a quarter for each child under fourteen; at home she receives no rations.

Messing Allowance.

Messing allowance—3d. per day—is paid to soldiers over nineteen years of age and with six months' training when doing duty, or on furlough; but not while in hospital, except from the effects of active service.

Separation Allowance.

Separation allowance is granted to soldiers' families (*i.e.* wife, and children under fourteen years of age) on the married establishment, while unavoidably separated from the soldier on account of his being ordered on some special duty.

Forage.

Forage is issued for every horse kept in accordance with regulations—

	Oats.	*Hay.*	*Straw.*
In barracks	10 lb.	12 lb.	8 lb.
In camp ...	12 lb.	12 lb.	nil

Palliasse Straw.

Palliasse straw is issued at some stations at home and abroad. In barracks 24 lb. is issued for each palliasse and bolster, and has to last ninety days. In camp 36 lb. for every two soldiers, 18 lb. more at the end of sixteen days, and at the end of thirty-two days fresh bedding is issued. When palliasses are not issued the use of mats is recommended. An issue of four trusses of 36 lb. each for every five soldiers for twenty-four days may be allowed as a maximum.

Fuel and Light.

Fuel and light are issued on a weekly scale to officers and men, and for offices and other public buildings and institutions. The winter season, when a larger allowance is granted, runs from October to May, and the summer season June to September.

Furniture Allowance.

General officers commanding districts at home and generals or colonels on the staff holding district commands in the Colonies, if they occupy unfurnished public quarters, receive a furniture allowance.

Lodging Allowance.

When public quarters are not available officers and soldiers are granted lodging allowance.

Travelling Expenses.

Officers, when proceeding on duty under military orders, are, as a rule, reimbursed the actual expenses of their journey. Officers, when proceeding with troops, and soldiers proceeding alone, are usually furnished with a route or warrant. A soldier's family is allowed travelling expenses when accompanying him on change of station, etc.

Passages.

Passages are granted under the same conditions as travelling expenses. Passages are also granted to the wives and families (excluding sons over sixteen years of age) of officers, when changing stations abroad, or

when the officer proceeds on active service; but the wives and families of officers have to pay the full cost of messing while on board.

Field Allowance.

A field allowance to cover extra expenses is granted to officers and warrant officers when under canvas for manœuvres, etc.

Allowance for Cleaning Chapels, etc.

An allowance is granted to cover the purchase of soap, blacklead, dusters, etc., for cleaning military chapels, schools and institutes.

Servants' Allowances.

When officers are not provided with soldier servants, they are granted an allowance to go towards the extra cost of keeping civilian servants.

Mess Allowance.

An allowance is granted towards the expenses of keeping up officers' messes. An allowance is also given towards starting officers' and sergeants' messes in newly raised battalions and regiments.

Losses.

Losses that occur through active service, shipwreck, accidental fire, destruction, or theft from public stores are paid for up to a certain fixed scale according to rank.

Postage.

All official postage and telegrams are paid for, and stationery is provided, or an allowance given for its purchase.

Purchase and Casting of Horses.

There are certain expenses allowed for in connection with the purchase and casting of horses. Officers are allowed to purchase Government horses under certain conditions.

Miscellaneous Allowances.

Table allowance is granted to officers commanding at certain stations at home and abroad.

Contingent allowance—a sum not exceeding £300 a quarter—is allowed to the officer in command of an army engaged in warlike operations, for the purpose of obtaining information about the enemy.

A contingent allowance, calculated on the numbers, is granted to each squadron, battery, or company to defray the expenses of postage, stationery, repairs of arm-chests, and cleaning materials.

An allowance is also granted to defray the expenses of posters, etc., in connection with recruiting.

Library Allowance.

An allowance is granted towards soldiers libraries for the provision and repair of books, the supply of newspapers, periodicals, and games, and for the pay of the librarians.

Outfit Allowances.

An outfit allowance is granted to officers promoted to commissions from the ranks and to retired officers called out on an emergency.

Miscellaneous Stores.

An allowance is granted towards providing miscellaneous stores and cleaning materials for offices and orderly rooms.

Fencing Expenses.

An allowance is made towards the cost of repairing foils, gloves, etc., used in gymnasia.

Soldiers' Funerals.

The actual cost of a soldier's funeral is borne by the public.

Bands.

An annual allowance is made in aid of all authorised regimental bands, which are, however, chiefly maintained at the expense of officers.

Various.

Allowances are also made towards—

(1) The expenses of pupils at Kneller Hall.

(2) For paying the Household Cavalry and Foot Guards.

(3) To the persons appointed to pay the effects of deceased soldiers.

(4) In lieu of board and washing to sisters at military hospitals.

(5) To the Hong Kong Regiment.

CHAPTER XXVI.

CLOTHING.

THE articles of clothing supplied to a soldier are detailed as—

(*a*) Personal clothing—*i.e.* articles which, after issue, are struck off charge in the clothing accounts and not again taken into store.

(*b*) Public clothing—*i.e.* articles which, after issue, are retained on charge in the clothing accounts.

The articles included in personal clothing are—

Boots and shoes
Caps
Gaiters
Gloves
Plaids
Sashes
Shoulder-pads
Sword-knots
Tassels (for sergeant drummer)
Drawers
Frocks
Jackets
Jerseys
Kilts
Pantaloons or breeches
Puttees
Trousers or trews
Tunics
Waistcoats

Those included in public clothing are—

Cloaks and capes
Greatcoats and capes
Girdle (Lancers)
Havresacks
Full headdress (according to corps)
Leather leggings
Spurs (jack)

Under this heading are also included the

waterproof clothing issued to transport drivers, submarine miners' coast battalions R.E., Army Service Corps boatmen, etc., and the working clothing (caps, canvas duck, drill, jerseys, leggings) issued to butchers and bakers of the Army Service Corps, railway companies R.E., and other men similarly employed.

Public clothing and necessaries are also issued for the use of men while in hospital or prison.

Watch coats are supplied for sentries, fatigue parties on rifle ranges, "look-out posts" in North America, and for certain other services.

Under the head of necessaries are included—

Badges	Mitts
Kit-bags	Razor and case
Blacking	Shirts
Boot-laces	Socks
Brushes	Sponge
Field-caps	Spurs (swan neck)
Cotton drawers	Mess-tin
Knife, fork, and spoon	Towels
Hold-all	Trousers (blue serge)
Jersey	Valise

And certain special articles used by mounted, Highland, and other corps.

Personal clothing is issued either annually or biennially, on the anniversary of the date of the man's enlistment, for all men enlisted since January 1st, 1894, and the second pair of boots six months afterwards. All personal

clothing used to be issued on April 1st, and the second pair of boots on October 1st. Personal clothing, when no longer required, is sold for the soldier's benefit. All repairs are done at the soldier's expense. Clothing outgrown by boys can be exchanged for a larger size.

Public clothing has to last for much longer periods than personal clothing; *e.g.*, the metal helmets for the Household Cavalry have to last twenty years, a Highlander's bonnet twelve years, a cloak for mounted services six years, and a greatcoat for dismounted services five years. All repairs are done at the soldier's expense.

If public clothing becomes prematurely unserviceable a board is held upon it, and on the recommendation of the board the Director of Clothing may authorise its replacement.

Articles outgrown by wearers may be exchanged.

Part-worn public clothing, when repaired, is reissued.

Men under training or in charge of transport, or under training as mounted infantry, receive while so employed extra articles of public clothing.

A staff and belt for the sergeant drummer of each battalion of Guards and of Infantry, except Light Infantry and Rifle battalions, is issued every twelve years.

When standards, guidons, or colours are replaced they remain the property of the State, and should be deposited in some

church or public building. No one is entitled to them.

Under certain circumstances men are allowed to receive compensation in lieu of personal clothing.

A soldier promoted to a higher or reduced to a lower rank will have his uniform altered at the public expense or be supplied with new uniform.

A soldier on discharge is, as a rule, entitled to compensation or to the proceeds of the sale of his personal clothing, except if discharged by purchase within three months of an issue of personal clothing or within three months of enlistment.

If a soldier is discharged—

(*a*) For false answer on attestation,
(*b*) Fraudulent enlistment,
(*c*) On sentence of penal servitude,
(*d*) With ignominy,
(*e*) As incorrigible and worthless or for misconduct,
(*f*) On conviction by civil power before or after enlistment,

he receives one pair of boots only; the rest of his personal clothing is sold and the amount credited to the public. But the man receives a suit of plain clothes.

Soldiers given up as apprentices, or discharged on payment of £10 within three months of enlistment, or claimed by their parents as under age, do not receive plain clothes or any allowance for them.

A free kit of necessaries is given to a recruit on final approval, and this kit has to be kept up at the soldier's expense.

Sea kits, except tobacco, are supplied at the public expense. The kit consists of—

1 clothes bag	1 tin of grease
2 flannel belts	1 housewife
1 worsted cap	

Soldiers are not allowed to purchase personal clothing or necessaries from tradesmen; they must be bought from public store. Public clothing is not issued on payment.

When personal clothing or necessaries in possession of a soldier are lost or damaged under exceptional circumstances, a board will investigate the cause, and if the commanding officer is satisfied that the loss or damage was beyond the soldier's control he may authorise an expenditure of £2 for his unit to replace the loss or damage. If the amount is more than £2 he must refer to the general commanding the district.

The price of clothing and necessaries includes the cost of marking; the only marking chargeable to the soldier is for condemned personal clothing handed to the contractor.

No personal clothing or necessaries brought home from India will be taken on charge for the Imperial Government, but public clothing in the possession of soldiers will be brought on charge at once.

Service in the Field.

While on active service, clothing of rank

and file quality is supplied to all ranks, except field caps for warrant officers and staff sergeants. Clothing and the first issue of necessaries are issued free; necessaries must afterwards be paid for, unless they are lost or damaged under exceptional circumstances. Clothing and necessaries are issued by the Army Ordnance Department. One hundred pairs of boots are carried by each Infantry battalion in its regimental transport.

CHAPTER XXVII.

MOBILISATION.

MOBILISATION means the completion of units for war in personnel, horses, and matériel. Some units exist in peace, and have then a peace establishment of personnel and other details; other units do not exist in peace, and are formed only for war. The men are obtained by calling in all men from detached duties and by calling out the Reserves. The extra officers are appointed in the usual manner. The additional horses are received from the Remount Department.

The war outfit, which consists of personal equipment, clothing, mobilisation or station equipment, regimental supplies, medical and veterinary supplies, is obtained from different sources.

With the exception of those for the Horse,

Field, and Garrison Artillery, Royal Engineers, Army Service Corps, Transport and Medical Staff Corps, reservists on being called up join at depôts (termed officially the "place of rejoining") and are there fully armed, clothed, and equipped before being sent to join their units. Men of the Army Service Corps proceeding to join medical units are not armed. Reservists join the Artillery and other corps enumerated above direct.

SCHEDULE OF RESERVISTS' PLACES OF REJOINING.

BRANCH.	*Place where Reservists required to complete Units to War Establishment are to Join.*	*Place where the Reservists Surplus to the Requirements of Units are to Join.*
Cavalry	Depôt.	As directed by O. C. Reservists.
Horse Artillery* ...	Place of Mobilisation of Unit.	Depôt.
Field Artillery* ...	Place of Mobilisation of Unit.	Depôt.
Mountain Artillery	Depôt.	Depôt.
Garrison Artillery	Place of Mobilisation of Unit.	Depôt.
Royal Engineers (except Submarine Miners)	Place of Mobilisation of Unit.	Depôt.
Submarine Miners	Depôt.	Depôt.
Foot Guards	Depôt.	Depôt.
Infantry of the Line	Depôt.	Depôt.
Army Ser. Corps Transport ...	Place of Mobilisation of Unit.	Depôt.
Supply ...	Depôt.	Depôt.
Medical Staff Corps	Companies in Districts.	Depôt.
Army Ordnance Corps	Depôt.	Depôt.
Military Police ...	Depôt.	Depôt.
Army Pay Corps	Depôt.	Depôt.
Post Office Corps	Depôt.	Depôt.
Militia Reservists (if wanted for Army Service)	Depôt of Unit they are eventually to join.	Depôt of Unit they are eventually to join.

* Including Ammunition Columns and Parks.

Horses are bought and collected at certain stations, and there sorted for either saddle or draught purposes, and allotted to units as required.

The personal equipment, which means a man's arms and accoutrements, are kept at the depôts, or for those units which men join direct (R.H.A., R.F.A., etc.) with the station or mobilisation equipment—*i.e.* at the place of rejoining.

The clothing, personal and public, and necessaries are kept for the present at Pimlico, but when more storehouses are built they will be decentralised and sent to the places of rejoining.

The mobilisation or station equipment is kept either at certain stations where the unit will mobilise or with the unit.

By mobilisation equipment is meant the vehicles, harness, saddlery, regimental reserve ammunition, and other stores required in addition to the peace equipment. If these articles are in charge of the unit, they are called station equipment; if in charge of the Army Ordnance Department, mobilisation equipment.

Regimental supplies, which include rations, emergency rations, and forage, are issued under the orders of the general officer commanding the district from the stock in the district.

Medical supplies, which include field medical panniers, field medical companions, and other articles of field medical equipment, are kept partly in districts and partly stored at Woolwich and Dublin.

Veterinary wallets are kept with the other

mobilisation equipment. Veterinary panniers and other stores remain for the present at Woolwich.

The war outfit does not include tents, blankets, reserve rations, or the transport for them; these articles are termed "special equipment," and are only issued when specially ordered.

The next point to consider is the preparatory measures that are taken during peace so as to facilitate mobilisation when ordered.

PERSONNEL.

For home defence general officers commanding districts are kept informed as to the duties allotted to the various units in their commands, and as to the numbers and ranks of officers and men that they will be required to furnish for units that are formed for war but which do not exist in peace, also those required for staff and other extra duties.

Officers commanding reservists are kept informed of the number of reservists required by units to complete their establishment. These numbers would depend as to whether the mobilisation were for home defence or foreign service. For home defence soldiers are considered fit who are capable of bearing arms and have completed a recruit's course of musketry (in the case of men to whom this is applicable). In the Army Service Corps and departmental corps the first condition only is requisite; for service abroad at present we fix the minimum age for Regulars at twenty years.

Horses.

General officers commanding districts prepare schemes for the purchase of horses. Retired officers and country gentleman are appointed horse purchasers in the neighbourhood of their residences, and on mobilisation they would be employed in buying horses, with a staff of veterinary surgeons and clerks to assist them. Under the Defence Act, 1888, in the case of national emergency, the Government can purchase or hire any animals required for service.

War Outfit.

The war outfit is kept stored as already enumerated, and ready for immediate issue.

Documents.

A supply of the documents required at once is kept ready—viz., posters calling out the Reserves, notices to rejoin, rolls to be filled up of men going to join units, and certificates showing number of reservist's family.

The notice to join consists of three parts—

(*a*) A notice specifying the time and place for joining.

(*b*) A travelling warrant to place at which he is to join.

(*c*) A postal order for 3s. (advance of pay).

Local Mobilisation Orders.

Generals commanding districts and officers commanding stations draw up local mobilisation orders, which include arrangements for the housing and feeding of the extra men collected

in their commands on mobilisation being ordered; also for the storage of surplus kits, baggage, and equipment of units on their leaving their peace stations, and for the engagement of civilian medical officers, clerks, etc.

PROCEDURE TO BE FOLLOWED ON THE ISSUE OF ORDERS TO MOBILISE.

If generals commanding districts have in their possession carefully drawn up local mobilisation orders, they have nothing to do but to put them at once in force when mobilisation is ordered. The men will be then called up, clothed, equipped, and sent to units as required; horses will be bought, collected at certain stations, and distributed; and, as everyone can be at once informed what he has to do, everything will work smoothly.

Officers commanding units should—

(1) Recall all officers and soldiers on leave.

(2) Order a medical inspection of officers and soldiers.

(3) Telegraph to the Military Secretary the number and ranks of officers required to complete the war establishment, after deducting those medically unfit and those told off for staff and other duties.

(4) Telegraph to the officer commanding the reservists of his unit the number of reservists required.

(5) Be prepared to move at once to the

place of mobilisation of the unit (if not at it), leaving behind all personnel not fit to take the field, surplus kits, etc.

(6) Arrange for accommodation and rations for all detachments called in from outlying stations and for the reservists about to join.

(7) Send off as soon as possible all officers and men required for other units or duties.

(8) Telegraph the hour of departure and probable time of arrival of all parties sent off.

(9) Send with each party all necessary documents.

(10) Arrange for the issue to the men serving, who are found fit for service, of the special articles of the war outfit sent from the Clothing Department. Arrange for the exchange of all unserviceable clothing and boots, and take into store the articles of clothing and necessaries that are to be left behind at the peace station.

(11) Send the horse conducting party with proper equipment to bring in the horses from the place ordered by the general officer commanding, and make arrangements for the stabling and forage for the horses on arrival.

(12) Draw the mobilisation equipment for the unit.

(13) Draw the regimental supplies, and arrange for the receipt of the medical and veterinary supplies.

(14) Arrange for the harness and saddlery to be fitted as soon as received.

(15) Issue ammunition if active operations are likely to begin soon; also have all swords, bayonets, and lances sharpened.

(16) Have all arms, clothing, etc., marked as far as possible.

(17) If the mobilisation is for home defence, send all officers and men unfit to take the field to the depôt, except those required at the peace station as caretakers of surplus kits, etc.

(18) Return to Ordnance Store any surplus ammunition as soon as mobilisation is complete.

Field army units will be considered fully mobilised as soon as the personnel is completed and the men have been clothed, armed, and equipped, the horses have been received and their harness fitted, and the whole of the war outfit has been obtained.

Commanding officers should report by telegraph to the general commanding their district directly their units are fully mobilised.

Officers commanding depôts should take the same action, as far as it is applicable to depôts, as officers commanding units; they should also—

(1) Send reservists, in parties from 50 to 100 strong under an officer, or non-commissioned officer, fully clothed,

armed, and equipped, to their units, with the necessary documents, *i.e.*—

Company defaulter sheet,
Medical history sheet,
Nominal roll (showing that the men have been paid up to the day they left the depôt).

(2) Organise surplus reservists into batteries, companies, squadrons, or battalions, and train them.

(3) If the reservists are not enough to complete the unit to war establishment, send men from the depôt, who are fit for service, to do so.

(4) Order all reservists to be medically examined, and send to their homes all those found unfit for service.

(5) Arrange for the storage or disposal of the plain clothes of reservists who join.

(6) Each man on joining to deliver up his identity certificate, life certificate, and parchment Reserve certificate, and to state whether he is married, a widower with children, or not married; if his documents do not show that he is married, he must make a formal declaration. If the man's family has a different name owing to his having enlisted under a false name, he must make a declaration to that effect.

(7) Issue clothing, necessaries, and personal equipment to all reservists fit for service.

(8) Strike off all absentees as deserters.

List of Mobilisation Depôts.

CORPS.		*DEPÔT.*
REGULARS.		
Cavalry — A Regiment of Cavalry		The reserve squadron, linked regiment on lower establishment, or cavalry depôt, according to instructions.
Royal Artillery	Royal Horse Artillery...	Horse Artillery depôts.
	Riding Establishment ...	No. 1 Field Artillery depôt.
	Royal Field Artillery ...	Field Artillery depôts.
	Mountain Artillery ...	Depôt at Newport, Monmouthshire.
	Royal Garrison Artillery	No. 1 depôt of the Division.
	Regimental District Staff	No. 1 depôt, Eastern Division Royal Artillery at Dover.
	School of Gunnery ...	
	Adjutant's Detachment	
	School of Gunnery ...	
Royal Engineers	Mounted men of all units and dismounted men of pontoon, telegraph, and balloon units	Field depôt at Aldershot.
	Dismounted men of all units, except pontoon, telegraph, and balloon units	Depôt companies at Chatham.
Infantry	Bn. of Coldstream Guards	Chelsea Barracks, London.
	Bn. of Grenadier Guards	Wellington Barracks, London.
	Bn. of Scots Guards ...	Tower of London.
	Bn. of Infantry of the Line	Regimental depôt.
Army Service Corps	Transport Branch ...	Transport depôt, Woolwich.
	Supply Branch ...	

List of Mobilisation Depôts (*continued*).

CORPS.	*DEPÔT.*
Regulars (*continued*).	
Royal Army Medical Corps (all units)	Depôt and Training School at Aldershot.
Army Ordnance Corps (all units)	Depôt company at Woolwich.
Military Police	Headquarters of Military Police at Aldershot.
Army Pay Corps	Army Pay Office, Aldershot.
Post Office Corps	Headquarters 24th Middlesex Volunteer Rifles, General Post Office, London.
Militia.	
All Arms	Peace headquarters of unit.
Forces Raised for Duration of War.	
Imperial Yeomanry	Place of formation.*
A Battery of Volunteer Artillery	Place of formation.*
City of London Imperial Volunteers	Depôt.
Royal Engineers (Volunteers)	Headquarters of corps of Royal Engineers (Volunteers) from which mobilised
Companies of Volunteer Infantry	Regimental depôt of Regular unit to which attached.
Volunteer Medical Staff Corps	Depôt and Training School, Aldershot.

* Unless other local arrangements are made and approved of by the War Office.

SCHEDULE OF OFFICERS COMMANDING RESERVISTS.

CORPS.	*OFFICERS COMMANDING RESERVISTS.*
Cavalry	Assistant Adjutant-General for Cavalry, 41, Pall Mall, S.W.
Royal Artillery :—	
Royal Horse Artillery	Officers comdg. depôts, R.H.A.
Riding Establishment	Officer comdg. No. 1 depôt, R.F.A.
Royal Field Artillery	Officer comdg. depôts, R.F.A.
Mountain Artillery ...	Officer comdg. depôt, Mountain Artillery, Newport
Royal Garrison Artillery, including District Establishment, and Militia Artillery Reservists	Officer comdg. No. 1 depôt of each Division.
Regimental District Staff, School of Gunnery. Adjutant's Detachment, School of Gunnery	Officer comdg. No. 1 depôt, Eastern Division Royal Garrison Artillery, Dover.
Royal Engineers ...	Assistant-Commandant, School of Military Engineering, Chatham.
Foot Guards	Officer comdg. each regiment, Horse Guards, Whitehall, S.W.
Infantry of the Line and Militia Infantry Reservists	Officer comdg. Regimental District of the territorial regiment. For the King's Royal Rifle Corps and Rifle Brigade the Officer commanding Rifle Depôt is the Officer commanding the Reservists.
Army Service Corps	Assistant Quartermaster-General, Army Service Corps, War Office, London, S.W.
Royal Army Medical Corps and Militia Medical Staff Corps Reservists	Deputy-Assistant Director, Army Medical Service, 18, Victoria Street, London, S.W.
Army Ordnance Corps	Officer comdg. Headquarters, Army Ordnance Corps, Woolwich
Military Police ...	Deputy Adjutant-General, Aldershot.
Army Pay Corps ...	Chief Paymaster, War Office, London, S.W.
Post Office Corps ...	District Paymaster, Home District, Craig's Court, London, S.W.

SPECIAL INSTRUCTIONS FOR UNITS FORMED ON MOBILISATION AND NOT EXISTING IN TIME OF PEACE.

One of the officers told off to the unit should be ordered to proceed at once to the place of mobilisation and take command of the non-commissioned officers and men who report themselves there for duty.

UNITS NOT EXISTING AS SUCH IN PEACE, BUT ORGANISED ON OR AFTER MOBILISATION.

The staff of the army in the field.

The staff of an army corps.

The staff of a division.

The staff of a brigade.

The regimental staff of corps Artillery.

The staff of a brigade division of Royal Horse Artillery.

The regimental staff of corps Engineers.

A staff on lines of communication.

The regimental staff of an Infantry or general depôt at base.

The regimental staff of a labourers' depôt.

An ammunition column.

An ammunition park, or a section of the same.

A siege train, Royal Garrison Artillery.

A section of 1-pounder Maxims, Royal Garrison Artillery.

A section of galloping Maxims.

A survey section, Royal Engineers.

A searchlight unit, Royal Engineers.

One or more companies of Mounted Infantry

(with or without a staff and machine gun section).

A transport company, Army Service Corps.

A supply column, Army Service Corps.

A field bakery, Army Service Corps.

A section of a supply park, Army Service Corps.

An auxiliary company, Army Service Corps, on lines of communication.

A bearer company.

A field hospital.

A general hospital.

A stationary hospital.

A hospital ship.

A hospital train.

Advanced depôt, Medical Stores.

Base depôt, Medical Stores.

A remount depôt on lines of communication.

A detachment of Army Pay Corps.

IMPERIAL YEOMANRY AND VOLUNTEER UNITS ORGANISED FOR THE DURATION OF THE WAR OR FOR ONE YEAR.

A battalion or company of Imperial Yeomanry.

A battery of Volunteer Artillery.

The City of London Imperial Volunteers—

The battery.

The mounted Infantry companies.

The Infantry battalion.

A section of Royal (Volunteer) Engineers.

A company of Volunteer Infantry.

PROCEDURE AFTER MOBILISATION.

When the mobilisation is completed, units

will be ordered to their place of concentration or assembly, the garrison to which they are allotted, or if for service abroad the port of embarkation.

The place of concentration or assembly is the place where mobilised units are grouped into "formations," the recognised formations being brigades, divisions, and army corps.

Detail of an Infantry Division.

PERSONNEL.

Detail.	*Officers.*	*Other Ranks.*	*Total.*
Staff	12	55	67
2 Infantry Brigades	264	8,428	8,692
1 Squadron Cavalry	6	154	160
1 Brigade Division R.F.A.* ...	19	511	530
Ammunition Column	5	201	206
R.E. Staff	2	5	7
1 Field Company R.E. ...	7	205	212
Supply Column	6	93	99
Field Hospital	5	56	61
	326	9,708	10,034
Left at Base	9	963	972

HORSES.

Private.	*Riding.*	*Draught.*	*Pack.*	*Total.*
161 ...	337 ...	1,260 ...	22 ...	1,780

VEHICLES (INCLUDING GUNS).

One-horse.	*Two-horse.*	*Four-horse.*	*Six-horse.*	*Total.*
17 ...	83 ...	135 ...	71 ...	306

For details of a brigade, see chapters on "Growth of the Army" and "Cavalry."

An unallotted unit remains at its place of mobilisation, and should not be used as part of the field army without orders from Army Headquarters.

* About to be increased to 2 Brigade Divisions.

Mobilised units, proceeding to places of concentration or to garrisons, take cooked rations and groceries with them in addition to their regimental supplies.

A ship conveying troops carries fifteen days' reserve rations in addition to the regimental supplies, and on disembarkation the officer commanding the unit receives instructions as to the number of days' reserve rations he is to take with him in addition to his regimental supplies. If possible, food for the first few days on shore should be drawn from the ship's stores.

A small reserve of horses (14,000) is formed by owners voluntarily registering, for a fee of 10s., their horses for one year. During the year of registration the owner is bound to produce a horse suitable for the purpose for which it is registered—*i.e.* either for riding or draught—and to be passed sound by a veterinary officer, at forty-eight hours' notice. The price at which the horse is to be sold is fixed at the time of registering. The horses registered are chiefly for draught purposes, and they proved some of the best animals sent out to South Africa, especially those obtained from the big omnibus companies, as they had been well fed and trained.

The number of horses and mules used in the South African campaign has been very large. Up to May 31st, 1901, 253,708 had been sent out, in addition to the large number obtained in the country. The mortality was heavy, and

on May 11th there were only 185,000 alive. It must also be remembered that a great part of the transport was done by draught oxen. The average cost of the horses sent out to South Africa was—

Those purchased at home ...	£42
In Canada	£30
In Australia, United States, and Hungary	£25—£20

To this must be added the cost of freight to Cape Town, which came to £38 or £40 a head.

In Cape Colony the ordinary trade price of a mule is £15 to £20; when war was declared the price rose to £30, and sometimes even higher.

When the oxen were taken over from the contractor the price per head ranged from £15 to £18; the usual price of a draught ox is about £10.

When the Army Corps is mobilised, the following rations and ammunition are carried:—

RATIONS.

On each man—remainder of day's ration and emergency ration.

In regimental transport—one field and two grocery rations.

In supply column (A.S.C.)—one field, one grocery, and one emergency ration.

In supply park (with army corps)—three days' rations.

FORAGE.

On horse—remainder of day's forage.

In regimental transport—one corn ration.

In supply column—one corn ration.

Each wagon in the second line of regimental transport and in supply column carries 80 lb. (one day's ration for four horses) patent forage in addition.

AMMUNITION.

The present ammunition carried by R.H.A. and R.F.A. (except for howitzers) is as follows. It is probable, however, that common shell will again form part of the ammunition carried in the field. It is now carried by howitzers only.

ARTILLERY.

	With Battery.	*Ammunition Column.*	*Ammunition Park.*
12-pr. (R.H.A.)—			
Shrapnel ...	134	95	59
Case	8	4	3
15-pr. (R.F.A.)—			
Shrapnel ...	142	74	73
Case	8	4	3

RIFLE.

	On Man.	*Regimental Transport.*	*Ammunition Column.*	*Ammunition Park.*
Mounted Infantry	100	130	56	76
Cavalry	30	21	25	3
Infantry	100	77	77	55

MACHINE GUN.

	On Gun.	*Regimental Transport.*	*Ammunition Column.*	*Ammunition Park.*
Mounted Infantry	3,500	17,600	13,200	11,000
Cavalry	3,500	17,600	13,200	11,000
Infantry	4,000	6,600	8,800	9,000

CHAPTER XXVIII.

TRANSPORT AND SUPPLY IN THE FIELD.

THESE two subjects are so closely connected that it would be impossible to avoid many repetitions if they were treated separately.

The transport of an army in the field is subdivided into—

i. Regimental transport, carrying—
   (*a*) Technical stores (for Infantry small arm ammunition and entrenching tools).
   (*b*) Baggage, equipment, and reserve rations.
   (*c*) Supplies for daily use.

ii. General transport—A.S.C. supply columns and supply parks, railways, canals, etc.

iii. R.A. transport—ammunition columns and parks, the personnel and horses belonging to the R.A.

iv. R.E. transport—pontoons, telegraphs, etc., the personnel and horses belonging to the R.E.

Thus it will be seen that the technical stores for each arm and a small amount of baggage and supplies (one day's rations and one emergency ration) are carried in the regimental transport, and that this supply is replenished by the general transport under the management of the Army Service Corps.

Supplies for an army in the field are obtained—

(1) From the base. If the base be on the sea, the supplies are probably brought from distant countries.

(2) Locally. By purchase in open market (applicable to a friendly country), by requisition in kind or by requisition in money and then purchase (applicable to a hostile country).

(3) By seizure. Enemy's military supplies or in savage warfare.

When supplies can be obtained locally there is at once a great saving in transport, but they can only be so obtained in a cultivated, fertile country. If the land is poor or the country very thickly inhabited, and therefore dependent for its food stuffs on outside sources, not much in the way of supplies can be obtained, although the inhabitants may be quite willing to sell what they can spare. In passing through a friendly country, stores can be collected at places on the proposed line of march ahead of the columns. From these "advanced depôts" the troops, as they come up, are fed. This is manifestly the easiest method of supplying an army, but the occasions upon which it can be put into practice are few. Instead of the hungry troops having to wait in camp for the arrival of the slower moving carts and waggons, the supplies are ready in advance of them and can be issued at once on their arrival.

In a fertile hostile country, when not close

to the enemy's armies, much the same thing can be done by sending the advanced mobile troops, *i.e.* Cavalry, R.H.A., and Mounted Infantry, to levy contributions in kind on the country as they pass through it, and have the stores collected at certain central points in advance of the slower moving main columns.

In both these cases, as the army advances small garrisons are left to hold points on the lines of communication (*i.e.* the line of advance followed by the main army), at which stores of all kinds, including transport animals and vehicles, are collected; these points then become "advanced depôts" for all reinforcements moving from the base to the front, and for all parties of sick, wounded, and prisoners, moving down from the front to the base, thereby enabling these parties to dispense perhaps altogether with transport for their supplies. With the increased power of defence due to modern rifle fire, and with a skilful adaptation of the principles of field fortifications, a very small garrison can hold posts of this kind, and the men composing them might be those who, from slight wounds or injuries, were not fit to keep up with the field army.* So at a very

* The number of these posts must depend altogether on the disposition of the inhabitants of the surrounding country. In Lord Roberts' Cabul-Kandahar march there were seventeen posts in 170 miles. In the Nile Campaign, between Cairo and Wady Halfa, a distance of 766 miles, three were found sufficient. We must not give details at present of the Block House system used in South Africa; but drawing up a scheme for such a system on large scale maps would be a profitable intellectual exercise for young officers.

small cost in men a great saving of transport can be effected, and if supplies come in freely from the surrounding district some can be passed on to the front, besides feeding the troops passing through. The difficulties of transport and supply become greatest when moving through a barren or uncivilised country, in which no supplies can be obtained; moreover, in these countries the trouble is increased by the absence or the badness of roads. On these occasions the army has to be fed from what are technically termed "movable magazines"; in other words, a long train of transport accompanies the column carrying the supplies necessary for the expedition, and these trains can only be replenished by the arrival of convoys from the base or by tapping a fresh source of supply. These convoys are liable to attack when passing through a hostile country, and even if not captured will be thereby delayed. In the Abyssinian Expedition under Lord Napier of Magdala the army had to be fed altogether from the transport train of pack animals (movable magazines) that accompanied it. This system of transport and supply could not be put into practice for a large army, nor for long expeditions, as in the latter case the animals, if pack transport were used, might only be able to carry their own forage and their drivers' rations. With wheeled transport the difficulties would not be so great.

Lord Roberts, in his despatch from Cape Town of February 6th, 1900, says: "No organised

transport corps existed when I arrived in South Africa. Some thousands of mules had been collected, and a number of ox and mule wagons had been purchased, but what is known as the regimental system had been adopted, which consists in providing each unit with sufficient transport for its ammunition, baggage, and two or three days' supplies. Such a system may answer well enough for peace manœuvres, where the troops march short distances daily for a week or ten days, and where depôts are established in advance from which the regimental stores can be replenished; but this system is quite unsuitable for extensive operations in a district where no food and scarcely any forage can be procured, where advanced depôts cannot be formed, and where all the necessaries required by an army in the field have to be carried for a considerable distance. It is, moreover, a very extravagant system, for during a campaign every corps is not required to be continually on the move. A certain number have to garrison important points and guard lines of communication, and for these transport is not needed. On the regimental system the transport attached to such corps would remain with them, and would therefore not be available for general purposes or, in the event of its being taken away from them, no one would be specially responsible for its supervision."

This extract must be read with great care, as it has apparently misled many readers.

First of all, the words "transport corps" are used, not "transport" only; and secondly, the term "advanced depôt" has two meanings in our military phraseology. The words "advanced depôt" are used technically to denote the last (*i.e.* the nearest to the field army) stage on the lines of communication. The words are also used to denote depôts formed in advance of the army, and from which the army draws its supplies on arrival. Advanced depôts in the latter sense can be made use of in manœuvres, as the area of ground is usually limited and the next camp to be occupied is approximately known. It is probable that it is in this sense that the words "advanced depôts" are used here. The "advanced depôt" in the other sense is an absolute necessity in all military operations on a large scale in an enemy's country. When a force starts from its base the first part of its journey in a civilised country is probably done by rail, the rail head becomes as a matter of course its advanced depôt. When, as it pushes on, the time arrives at which it must leave its railway and take to roads a constant stream of supplies must still be kept pushing on after it, and the last "stage" becomes for the time being its advanced depôt. At times; owing to the unfavourable nature of the country for defence or other similar causes, it may not be possible to push the advanced depôt close up to the field army. This at once increases the strain on the transport department, as the

wagons have to cover a longer distance in going to the depôt to fill up. The above quoted extract from Lord Roberts' despatch cannot be taken as condemning the system of regimental transport, as this system was reinstated at a later period of the campaign, but evidently means that under the then existing circumstances he considered that he would do better by letting go temporarily of his lines of communication, and to work with a "movable magazine" until he captured some decisive points, which would give him a better line of communication. This is always looked upon as a bold stroke in war, but if the objective undertaken proves successful the results are usually considerable. Many great commanders have done the same, and their operations have been crowned with a decisive success. Sherman lived on the rapine of the country in his front during his advance from Atlanta to Savannah in 1864.

To take away all transport from a regiment would destroy its mobility, and Lord Roberts allows this, as he says that the regiments whose transport he took away were intended for the time to act as sedentary garrisons of points on the lines of communication. Directly these same regiments were required to take their places as part of the field army they would be quite useless tactically without their first line of regimental transport, and could only move one day's march from their base without their second line. Under our normal

regulations the regimental transport carries ammunition, entrenching tools, a certain amount of medical stores in the first line; and one day's rations and forage, cooking utensils, and a small amount of baggage and stores in the second line. The day's rations are issued after the day's march, and the regimental wagons have to fill up for the next day from the brigade supply column, which is worked by the Army Service Corps, but is under the orders of the general officer commanding the brigade. The brigade supply column carries only one day's rations and forage and one emergency ration; so, having replenished the regimental wagons, the supply column must go either to the advanced depôt or to the supply park (which carries three days' rations) to fill up. When the lines of communication are in working order supplies are brought to the advanced depôt as far as possible by rail, river, or canal, and then by road by auxiliary companies of the Army Service Corps. These auxiliary companies are supervised by a small military personnel of the Army Service Corps, and are expanded greatly by civilian drivers and transport obtained locally.

That Lord Roberts was able to carry out the reorganisation of his transport in the short period of seven days was due to the good work done by the officers engaged up to this time in organising the transport in South Africa, and Lord Roberts states that he found ready to his hand large numbers of mules, oxen, and wagons

ready to be moved at once to the theatre of his intended operations. At this period the transport had been arranged on three lines—the western about the Orange and Modder Rivers; the midland about Rensburg Siding, Naauwport, and Port Elizabeth; the eastern about Sterkstroom and Queenstown.

On the western line there were on January 15th, 1900, in addition to the regimental transport with each regiment:—

At Modder River—

Supply columns for 2nd Cavalry Brigade; 1st, 3rd, 9th Infantry Brigades; 1st Divisional Troops.

At Orange River—

A supply park of 105 ox wagons.

At De Aar—

A supply park of 123 ox wagons.

A supply column for the 13th Infantry Brigade (in course of formation).

Two auxiliary (mules) companies, Army Service Corps.

At Stellenbosch and Cape Town—

Two auxiliary companies, Army Service Corps (waiting for their wagons).

A corps troops supply column.

A depôt at Cape Town.

On forming his "movable magazine" Lord Roberts reorganised the ordinary units of regimental transport, supply columns and parks, into large companies — 1,040 mules to each company. That there were many difficulties attending the employment of a movable maga-

zine in a country like South Africa, and when opposed to enemies who were such adepts at harassing convoys as the Boers, cannot be denied, but "no difficulties, no generals."

In the first place, the train is long and unwieldy, and the longer it is the slower it moves; it requires protection, and takes up a lot of room on the road and in camp. Directly any detachments are made from the main column the train must be split up also, and a difficulty arises as to sending wagons that contain the quantity and nature of supplies that are required by each detached force. The officer in command of the train can no longer supervise his command, and the detached portions, not belonging to the units they are sent with, do not work so willingly as regimental transport.

In the second place, as the movable magazine can only carry supplies for a limited period, it must be replenished by convoys or by tapping a new source of supply.

That the loss of a convoy is a serious matter will be seen from the following extract from Lord Roberts' despatch relative to the loss of his convoy at Waterval Drift: "The wagons contained a quantity of supplies of groceries for the troops and of grain for animals, and I felt to abandon them meant a considerable loss to the stores on which we had to depend. In view, however, of the absolute necessity of pushing on the advance, and realising as I did that to leave troops at

Waterval Drift until such time as the convoy could again be set in motion would weaken my force and probably cause it to be delayed, I decided to abandon the supplies, wagons, and oxen, and to order the troops to withdraw." The loss of a convoy might mean the failure of the operation.

A transport officer should be an expert at his work. He should be so strong and active as not to feel fatigue. He should be a good horse master, and skilled in handling any other transport animal, thoroughly understanding his animals and knowing how to get the maximum of work out of them with a minimum of loss. He should have a good eye for country, so that when travelling in an unknown country he may, from the configuration of the ground, be able to form an idea as to whether the road in front of him will be a difficult one or not. He should also be observant of the signs of the weather, as by pushing on he may just get across a ford that a storm would render quite impassable, or he might remain in a sheltered place till the storm was over, instead of finding himself in an open plain with his road turned into a quagmire and his animals dying from exposure. And lastly, he must not mind unmerited abuse, as, do what he will, transport cannot always arrive at the exact time at which it is wanted.

A short comparison of the carrying capacities of different vehicles and pack animals is useful for reference:—

A train of 30 trucks will carry ...	300 tons.	
A boat 20 ft. by 6 ft. by 4 ft.	10 tons.	
A farm wagon ...	2 tons.	
A General Service wagon	1 ton.	
Elephant	1,000 lb.	Inclusive of pack saddle.
Camel	400 lb.	
Horse	250 lb.	
Mule or bullock ...	160 lb.	
Donkey	100 lb.	
Man	40 to 70 lb.	

As the transport in South Africa has been very carefully organised, it may be useful for experience in future operations to give in rather full detail some important particulars of the regulations. The following extracts are taken from the "Revised Instructions for Transport Organisation and Administration," dated Pretoria, 1st February, 1901.

First comes the organisation of the transport staff, which consisted of—

(*a*) One assistant adjutant general and other transport staff officers at army headquarters.

(*b*) At the headquarters of lines of communication and large commands a deputy assistant adjutant general for transport.

(*c*) Posted to districts, detached forces, etc., a transport staff officer.

(*d*) In the eastern, western, and midland

sections, lines of communication, the staff officers for "B" duties to act as staff officers for transport.

In all cases where the strength of mule transport exceeds 100 wagons, and where more than one mule company and one ox company are attached to a force or column, a staff officer for transport will be detailed, who will be on the staff of the general or other officer in command, and will under his orders carry out all the duties connected with the working of the transport of the force to which he is attached.

With the exception of the first line transport, *i.e.* four S.A.A. carts, tool cart, medical stores cart, pack mules for ammunition, machine gun, and water cart, the whole of the transport personnel, animals, and vehicles will be organised in Army Service Corps transport companies.

The normal establishments of mule and ox transport companies are as follows, but these numbers will not necessarily be adhered to, as corps transferred from another command, who brought their transport with them, were to attach all their transport, except the first line, to the transport companies of the new command.

Mule transport company :—

(*a*) Army Service Corps personnel—

1 Major or Captain.
1 Subaltern.
1 Warrant Officer.
1 Company Sergeant-major.

1 Company Quartermaster-sergeant.
4 Sergeants or Corporals.
2 Second or Lance-corporals.
1 Trumpeter.
10 Drivers (including 2 cold shoers).
2 Farriers (shoeing and carriage smiths when available).
1 Wheeler.
1 Collar-maker.

(*b*) Civilian personnel, vehicles, and animals—
5 Conductors.
110 natives + 10 per cent. spare.
49 buck wagons.
4 Scotch carts.
1 water cart.
19 horses.
520 mules + 10 per cent. spare.

On February 1st, 1901, there were 45 mule Army Service Corps companies.

Ox transport company:—

(*a*) Army Service Corps personnel—
1 Captain.
1 Subaltern.
1 Warrant Officer.
1 Company Sergeant-major.
1 Company Quartermaster-sergeant.
2 Sergeants.
2 Corporals or Second Corporals.
1 Trumpeter.
2 Farriers (shoeing and carriage smiths if available).
1 Wheeler.
10 Drivers.

(*b*) Civilian personnel, vehicles, and animals—

1 Superintendent.
2 Head Conductors.
10 Conductors.
200 native drivers and leaders + 10 per cent. spare.
1,600 oxen + 10 per cent. spare.
100 ox wagons.
1 water cart.
24 horses.

On February 1st, 1901, there were 25 ox Army Service Corps companies.

A second subaltern will, if available, be posted to all mule and ox companies acting as depôt companies.

All officers commanding transport companies will be direct accountants, and responsible for the pay, discipline (with full powers of a commanding officer) and interior economy of their companies.

All horses and mules will be branded with the numbers of their permanent company on the off fore hoof, and with a serial number on the near fore hoof.

Transport draught oxen will be branded with a broad arrow ($2\frac{1}{2}$ inches) on the near quarter and on each horn ($\frac{5}{8}$ inch brand).

Courts of inquiry will be held on all losses of transport animals, vehicles, and equipment, except casualties from sickness, and the general or officer commanding the force will record his opinion as to responsibility for loss. In the case of deaths from sickness the entry in the

animal account must be supported by a certificate signed by a veterinary officer, or, if no veterinary officer is available, by the officer commanding the company.

All mule and ox wagons will be numbered —the mule wagons on the off side and the ox wagons on both sides, from 1 consecutively through the company.

Civilian Establishment.

When engaging civilian *employés*, British or native, a form of agreement will be filled up, signed by the man engaged, witnessed, and countersigned by the engaging officer.

Then follow the rates of pay, gratuities, sick leave, rules for payment, the clothing issued free, disciplinary fines, and discharges (when a protecting certificate was to be given).

Transport Attached to Corps, Batteries, and Medical Units.

In mounted corps and Infantry battalions an officer other than the quartermaster will be appointed transport officer with pay. This officer may, at the discretion of his commanding officer, be required to do duty with his squadron or company at any time when contact with the enemy make it desirable that he should do so.

The regimental transport officer will be responsible to his commanding officer for the care of all transport animals, vehicles, and equipment (first and second lines) attached to his unit, both in camp, as to feeding, watering,

etc., and on the march, as to the loading of wagons, fitting of harness, bringing up his wagons in good time, etc.

GENERAL RULES (EXTRACTS FROM).

Attention is called to the necessity of providing grazing grounds for transport animals. Every care must be taken to prevent intentional burning of the veldt by farmers, and the careless burning of it by the troops upon all lines along which convoys are required to move. Whenever cattle are collected or captured, all oxen likely to be suitable for draught are to be at once selected and taken on the strength of a transport company or depôt, and not handed over as slaughter stock.

The attention of general officers commanding and others is directed to the following points:—

(*a*) Watering. Mules must not be tied together or knee-haltered when watering; shy and weak ones do not get enough to drink, and suffer in condition accordingly. A number of animals have been drowned owing to neglect of this order.

(*b*) Mules and horses should be allowed to graze singly and be knee-haltered; they must not be tied together.

(*c*) Grain foods must be given in dissel-boom mangers or in nosebags. The grain must not be laid on the ground, as this practice entails loss of forage and damage to animals from eating

earth or sand with their food. It is of great importance that animals should get their full ration of salt, and this point requires personal attention on the part of transport officers and conductors.

(*d*) Mules and oxen must not be flogged. They can be made to exert themselves by the use of the voice and by cracking the whip over them. The use of long whips with mule transport is prohibited.

(*e*) As far as possible the shoeing of transport mules in South Africa will be discontinued. Veterinary officers with forces will advise as regards individual animals for which shoeing may be necessary as a temporary or permanent measure. Wheel mules will sometimes require shoeing in wet weather.

(*f*) It is essential that transport animals should be given sufficient room to get good grazing. If necessary, grazing guards must be provided to ensure this.

(*g*) Conductors must personally see their animals watered and fed, and go with them to the grazing grounds. This is also the duty of company and regimental transport officers when circumstances permit of this being done.

(*h*) The ox transport with the army has

been purchased from the contractors, and is now the property of the Imperial Government. It is of the utmost importance that every possible care should be taken of the oxen, and that the authorised trekking hours should be observed. The oxen have not yet recovered from the privations of the past winter, and steps must now be taken to ensure their regaining condition while the grass is good. If this is not carefully attended to, serious difficulties may arise in replacing future casualties.

(*i*) During the summer months transport should move in the early morning and evening, with a halt of at least four, and if possible six, hours.

(*k*) Unless specially ordered to the contrary, no one is to ride on a transport wagon except on the written recommendation of a medical officer or the written permission of the man's commanding officer.

(*l*) It is at times desirable for tactical reasons to move convoys and baggage wagons on a broad front. It should, however, be borne in mind that this formation generally means delay and entails extra wear on the animals, especially when the occurrence of defiles necessitates a frequent diminution of front. On these occasions

transport animals must not, except in cases of great necessity, be urged beyond their usual pace in order to regain a broad formation. The limit of pace for a loaded mule wagon is four miles an hour. Loaded ox wagons cannot, as a rule, move at more than two and a half miles an hour without unduly distressing the oxen. With a large ox convoy or a mixed train inspanning of ox transport, which, as a rule, moves last, should be deferred as long as possible, and the wagons should then be inspanned by sections so that the oxen will not be kept standing under the yoke.

(*m*) The condition of all transport vehicles must be carefully watched, and all loose bolts screwed up at every camp. Greasing of wheels requires constant attention.

(*n*) It is the duty of civilian superintendents and conductors to take proper precautions against pilfering from the wagons in their charge. Should they omit to do this, they will be held responsible for losses, and dealt with for neglect of duty.

(*o*) Officers in charge of transport will see that all harness is properly fitted, special attention being paid to the correct positions of the breast collar and breeching.

(*p*) All harness must be kept well dubbed and in good repair.

A Transport Live Stock Recovery Department was formed, with the following objects:—

(i.) To collect Government animals which had strayed, or had been dropped on the line of march, or had been irregularly or unlawfully acquired by individuals.

(ii.) To establish depôts for receiving the above animals, and to re-issue them to the transport or remount services. Any slaughter or mixed stock which may be collected will be transferred under instructions obtained from the director of supplies.

The department had farms at Johannesburg, Standerton, Daasport, Bronkerstpruit, and Rietfontein.

When from injury or sickness a Government transport animal has to be abandoned, it should, whenever possible, be left in charge of the inhabitants of the nearest farm, and a certificate given signed by the officer, stating the circumstances and directing the individual to report possession to the administrator of the district at the earliest opportunity. Commanding officers will notify the farms where animals belonging to their units have been left, with a view to their ultimate recovery.

Grazing farms were established at the following centres:—Norval's Pont, Harrismith, Bloemfontein, Ficksburg, Brandfort, Bethle-

hem, Vet River, Pretoria, Kroonstad, and Waterval.

The following useful tables of stores carried and their respective weights are given for guidance:—

TECHNICAL EQUIPMENT AND STORES FOR OX TRANSPORT COMPANIES.

On each wagon—

Felling axe	1
Pickaxe (6½ lb.)	1
Bucket (12 in.)	1
Bell-hook	1
Spade	1
Shovel	1
Buck-sail	1
Blocks for brake (spare)	2
Pins, linch (spare)	2
Water-cask (16 in.)	1
Links, connecting (spare)	6
Riems, hide (spare)	16
Spanner, adjustable	1
Hammer (1¼ lb. head)	1
Hand-saw (3 teeth to 1 in.) ...	1
Jack, lifting	1
Auger, screw, 1 in.	1
Grease, 7 lb. tins	2
Rope, 1 in., 30 yd. length	2
Rope, 1 in., 16 yd. length	2
Nuts and bolts and iron washers	20
Kaffir pot, 1 gal.	1
Washers, leather, for wheels (spare)	12

Nails, clout	½ lb.
Yokes (spare)	2
Yoke skeys (spare)	20
Ox shoes for each team (spare), with nails	1 set
Nails, assorted	1 set
For each section—	
Disselbooms (spare)	2
Wheels, hind	2
Wheels, fore	2

SCALE OF BAGGAGE, KIT, EQUIPMENT, ETC., TO BE CARRIED WHEN TROOPS OPERATE IN THE FIELD.

Baggage.

Officers—

Divisional General	100 lb.
General Officer commanding Brigade	75 lb.
Commanding Officer of Regiment	50 lb.
Commanding Officer of Brigade Division R.A. ...	
Departmental Staff Officers ...	
Special Service Officers of rank of Colonels and Lieutenant-Colonels ...	
All other officers	35 lb.

Warrant Officers and Staff Sergeants—

Baggage	10 lb.
Blanket and waterproof sheet	8 lb.
	18 lb.

N.B.—Carry one blanket on them.

Non-commissioned Officers and men—

1 blanket	$4\frac{1}{2}$ lb.	$9\frac{1}{2}$ lb.
1 waterproof sheet ...	$3\frac{1}{2}$ lb.	
1 shirt	$1\frac{1}{4}$ lb.	
1 pair socks	$\frac{1}{4}$ lb.	

All other kit, kit bags, etc., will be left at the advanced base when troops move off.

Messes and Cooking Necessaries.

Officers—

10 lb. per officer and 20 lb. extra per mess.

Other ranks—

1 camp kettle (8 lb.) for 12 men.

Regimental Baggage.

Lanterns and candles—

1 lantern (folding) per company of Infantry, and 2 for the headquarters of each battalion (at 7 lb.).

2 lanterns per squadron, battery, or mounted company, and 2 for the headquarters of each mounted corps.

One month's supply of candles for above.

Rifle oil, dubbing, soft soap—

One month's supply.

Buckets—

2 per company of Infantry, squadron, or similar unit, and 2 for the headquarters of each battalion or mounted corps. Mounted troops and artillery carry additional buckets with them for watering animals.

Detail of Equipment Carried by Infantry.

	lb.	oz.
Axes, felling, 18	105	3
Axes, hand, 12	24	12
Axes, pick, 20	174	6
Bars, crow, 12	144	0
Saws, 3 (with set for ditto)	13	3
Shovels, 20	106	4
Spades, 4	21	10
Hooks, bill, 20	45	10
Hooks, reaping, 20	23	2
Sand-bags, 1,000	312	8
Butcher's implements	61	8
	1,032	2

Medical Equipment.

Medical companion	12	0
Surgical havresack	6	0
Field panniers, 2	106	0
Stretchers, ambulance, 8	272	0
Water-bottle	1	10
	397	10

Note.—(1) A large number of vehicles of local pattern had from time to time been collected, and had, as a rule, been fitted out with horses, mules, or oxen obtained from various sources. These animals and mules were to be considered as Army Transport, and marked and branded.—(2) Vehicles and animals which had been purchased by individual officers, officers' messes, or other persons attached to forces or garrisons, were to be considered as Army Transport in so far that they were not to be disposed of without reference to Army headquarters.

STORES.

	lb.	oz.
Oil, one month's supply for rifles and machine guns...	55	0
Dubbing	40	0
Soft soap, one month's supply	20	0
Materials for cleaning arms	6	0
Tools, opening packages ...	4	14
Balances, spring, 80 lb., 4 ...	13	4
Knives, tin-opening, 48 ...	24	0
Candles, boxes of, 8	12	8
Files, 3	0	14
Grindstone, 1	19	0
Pliers, 2 pairs	1	0
Maul, 1	13	0
	209	8

DETAIL OF TRANSPORT REQUIRED BY INFANTRY BATTALION.

First line.—Detail of mules—

	Draught, or Pack	*and Draught.*	
1 machine gun ...	2	3	0
2 water-carts ...	12	6	6
4 S.A.A. carts ...	24	8	18
1 Scotch cart (tools)	6	0	0
Signalling equipment	0	3	0
Ammunition ...	0	2	0
Medical officer ...	0	1	0
Add 10 per cent. spare (when available) ...	4	2	0

When pack mules are issued for water and

S.A. ammunition, one water-cart and one S.A.A. cart to be returned to store.

An increased allotment of pack mules has been made to certain forces operating in mountainous districts.

Transport required when carrying two days' supplies (usually known as second-line transport in the official books):—

	lb.	
(*a*) Officers' baggage—		
24 officers at 35 lb. each and one C.O. at 50 lb.	890	1 buck wagon.
Mess kit, 25 × 10 + 20 ...	270	
Stationery and books ...	105	
Stores	210	
	1,475	
(*b*) Medical equipment—		
As before	398	1 Cape cart
(*c*) Men and animals' baggage—		
1,000 men at 9·5 lb. ...	9,500	3 buck wagons.
10 Warrant Officers and Staff Sergeants at 18 lb.	180	
Cooking pots for 1,000 men	660	4 buck wagons.
Lanterns and candles ...	70	
Buckets, 10 × 5	50	
(*d*) Supplies (two days)—		
1,000 men's rations at 4 × 2	8,000	
8 horses' rations at 15 × 2	240	
49 horses' rations at 10 × 2	980	

(*e*) If greatcoats are carried—

1,000 greatcoats at 6·5 lb. 6,500 { 2 buck wagons.

Total, 10 buck wagons and 1 Cape cart.

TRANSPORT FOR LIGHT BAGGAGE EQUIPMENT AND TWO DAYS' RATIONS AND FORAGE FOR A CAVALRY REGIMENT.

(*a*) The complete estimated strength of headquarters is:—

7 Officers.
6 Warrant Officers and Staff Sergeants.
38 Non-commissioned Officers and men.
53 horses.

(*b*) Squadron—

6 Officers.
2 Staff Sergeants.
152 Non-commissioned Officers and men.
161 horses.

(*a*) Baggage, etc., required by headquarters' staff is as follows:—

		lb.
(1) Officers, 6 × 35 + 50	260	350
Mess, 7 × 10 + 20 ...	90	
(2) Warrant Officers and Staff Sergeants, 6 × 18	108	488
(3) Non-com. Officers and men, 38 × 10	380	
(4) Rations and forage—		
Two days' rations for 51 at 4 lb.	408	1,998
Two days' forage for 53 horses at 15 lb. ...	1,590	

(5) Stores and equipment—	lb.	oz.
4 camp kettles at 8 lb. ...	32	0
2 lanterns with candles ...	17	0
Dubbing (one month)	35	0
Oil (rifle, rangoon, and paraffin)	10	0
8 bill-hooks	18	12
Butcher's implements (2 cases)	62	0
3 saws (tenon), 14 in. butchery	4	8
Horseshoes (27 sets and nails)	141	12
Tools (opening packages) ...	4	14
2 tool chests (complete) ...	192	0
1 field forge, G.S. (complete) ...	482	0
2 veterinary panniers	474	0
Medical equipment	497	4
Stationery	25	0
7 buckets	4	3
Spring balance (80 lb.) ..	3	5
14 forage cords	7	14
2 knives (tin-opening) ...	1	4
	2,012	12

Total weight, 4,848 lb. 12 oz. Transport allowed—one buck wagon, one Scotch cart.

Per squadron :—

	lb.	
(1) Officers—		
6 × 35	210	290 lb.
Mess, 6 × 10 + 20 ...	80	
(2) Staff Sergeants, 2 × 18 ...	36	1,556 lb.
(3) Non.-com. Officers and men, 152 × 10	1,520	
(4) Rations and forage—		
2 days' men, 152 at 4 lb.	1,216	6,046 lb.
2 days' horses, 161 at 15 lb.	4,830	

(5) Stores and equipment—	lb.	oz.	
1 spring balance, 80 lb.	3	5	
1 crowbar (3 ft. 6 in.)	12	0	
Books	10	0	
2 lanterns and candles for one month ...	17	0	
12 buckets (canvas) ...	7	4	
1 case of tools and materials	35	8	637 lb. 9 oz.
40 forage cords ...	22	8	
11 reaping hooks ...	12	12	
12 camp kettles ...	96	0	
80 sets of horseshoes...	420	0	
2 knives (opening tins)	1	4	

Total weight, 8,529 lb. 9 oz. Transport allowed—three buck wagons.

The equipment for Mounted Infantry and Yeomanry was much the same.

For the headquarters of the regiment one mule wagon and one Cape cart for medical equipment; and per company (120 strong) two buck wagons and one S.A.A. or Scotch cart for ammunition.

SECOND LINE TRANSPORT ALLOWED FOR VARIOUS UNITS.

Divisional Headquarters... ...	2 mule wagons and 1 Scotch cart or trolley.
Brigade Headquarters... ...	1 mule wagon and 1 Scotch cart or trolley.
Battery, R.A. ...	1 mule wagon.

Field Hospital ...	4 mule wagons and 1 Scotch cart or trolley.
Bearer Company	2 mule wagons and 1 Scotch cart or trolley.
Field Company or Troop (R.E.) ...	6 mule wagons.

Mobile columns are supplied with sufficient mule transport to carry four days' rations and forage. Troops on lines of communication have only first line transport. Sufficient transport is, however, allowed at each station to carry out station work.

The average load of a mule buck wagon is 3,000 lb., a Scotch cart 1,500 lb.; a four-wheeled vehicle (buck wagon) will be drawn by ten mules, a two-wheeled (Scotch cart) by six mules; the average load of an ox wagon (sixteen oxen) is 4,500 lb., of an ox cart (six oxen) 1,500 lb.

A very much heavier load is usually carried by traders, 10,000 lb. being frequently carried on ox wagons, and 6,000 lb. on mule wagons, with an extra pair of oxen or mules.

The word "buck" as a prefix to wagon is a local term, the origin of which is not known. The wagon is constructed on the principle that, by having the body fixed between four uprights and free from the lower part or carriage, it can go over drifts and other ground so rough that it would be impossible for an ordinary wagon to cross without upsetting.

The following gives the scale of rations for field service in South Africa.

Daily Ration.

Meat.—1 lb., fresh, preserved, or salt. When the supply of cattle is abundant the ration of 1 lb. fresh meat during active operations may be increased by the general officer commanding to 1¼ lb.

Bread.—1¼ lb. bread, or 1 lb. biscuit, or 1 lb. flour or meal. When flour is issued yeast will also be issued.

Groceries.—⅓ oz. coffee and ⅙ oz. tea, or double ration of either, or ⅓ oz. chocolate or cocoa in lieu of either, 3 oz. sugar, ½ oz. salt, $\frac{1}{36}$ oz. pepper.

Lime-juice.—$\frac{1}{10}$ gill, when fresh vegetables are not issued or when medical officer thinks necessary.

Vegetables.—1 oz. compressed, or ½ lb. potatoes or other fresh vegetables, or 2 oz. split peas, or ¼ lb. onions, or 2 oz. rice.

Spirits.—½ gill when notified in general orders.

Soap and tobacco.—Not exceeding 1 lb. per man per month from Army Service Corps or on payment.

Fuel.—1 lb. wood or coal, only issued when available.

Note.—Rations will be issued at such times as will enable troops marching during the night or early morning, or who are under arms before daybreak, to have a cup of coffee, chocolate, or cocoa before they start, and to carry with them a balance of the ration sufficient for a meal on the following day.

The above extracts, which are rather long, are well worth the study of officers, as should European complications necessitate our fighting a defensive campaign in any of our large colonies the transport arrangements made in South Africa would give a useful basis to start upon, as the conditions would not be very dissimilar in many of our colonies.

Cape Colony produced many mules, it being a mule-breeding country. Natal, on the other hand, possessed few mules, oxen being used for transport work. The oxen were of two classes—the coast ox, a large animal, which did not do well up country; the Kaffir ox, a smaller animal, and very useful, especially up country.

CHAPTER XXIX.

DEMOBILISATION.

As this is the first experience we have had of demobilisation on anything like a large scale, it may be useful to give a sketch of the regulations laid down for the demobilisation of the troops mobilised for service in South Africa. These regulations will be useful on future occasions, and with certain modifications could be adapted to demobilisation after mobilisation for home defence.

On the receipt of the order to demobilise, units not remaining in South Africa revert

to the peace establishment of personnel, horses, and equipment.

Officers commanding units, details, and mobilisation depôts carry out at once the discharge, transfer, or retransfer to the Reserve of all the men under their command. Infantrymen on furlough are taken for discharge on the strength of their regimental depôts.

Units as they arrive home do the same. They should send home one officer and one or two non-commissioned officers in advance, to get the documents ready by the time the unit itself arrives.

On the arrival at home of a unit its details or reserve squadron rejoin it under orders from Army headquarters. A readjustment of the promotion of non-commissioned officers is made, by order of the general commanding the district where the unit is serving. Although the appointments of some non-commissioned officers may have to be antedated, such antedate will carry no increase of pay with it. Some non-commissioned officers may also have to be promoted to a higher rank, and will remain supernumerary until absorbed.

A certain number of reservists (10 per cent.) may be allowed to extend their service or to re-engage. As men of Section D* are not serving on Army attestations, they must be given a free discharge from Section D and re-enlisted.

Re-enlisted militiamen who fulfil the neces-

* *See* Appendix.

sary conditions are allowed to re-enlist into the regular Army.

On demobilisation each reservist is granted furlough for forty-two days, with an additional seven days for each month or portion of a month of service with the colours on mobilisation beyond six months, no deductions from service to be made for furlough granted prior to demobilisation or for periods of absence or imprisonment. During this furlough the men are not liable to recall. They will receive their travelling expenses.

Reservists in hospital or on sick furlough when they should be demobilised continue to draw Army emoluments until fit to resume their usual occupations. They must, if on furlough, forward a medical certificate every month showing they are unfit for work. After six months they must appear before a medical board. They are granted the usual furlough on discharge. Any period spent in prison after demobilisation is deducted from the period of furlough the reservist may be entitled to.

Convalescents may proceed on furlough, and on its expiration be examined at the nearest military station.

Army reservists who have been transferred to another corps may, before demobilisation, be retransferred to their original corps.

A reservist's family is given travelling expenses to rejoin him at his selected place *of residence.* A list of all married reservists

granted furlough must be sent to the paymaster paying the separation allowance. On going on furlough the reservist receives any balance of pay due to him. If this is less than 10s., it is to be made up to that sum. The balance of pay, messing, and ration allowance for the period of furlough is sent in two instalments—the first the day after the man goes on furlough, and the balance one month later. In exceptional cases the whole amount may be paid at once.

If a reservist is discharged as unfit or on account of the completion of his engagement (including the extra twelve months), he is to receive the furlough allowances he is entitled to, provided he has served at least six months with the colours since mobilisation.

Reservists of Section A* will cease to belong to that section on retransfer to the Reserve.

War Outfit.

The personal equipment of reservists will be returned to the unit, details, or depôt by which they are demobilised.

Clothing and Necessaries.

Soldiers arriving home for further service have reissued to them their clothing, etc., which they left behind on embarkation, and after it has been continued in wear for as long as the man's commanding officer thinks it is fit, it will be replaced by new issues. Men about to be brought forward for dis-

* *See* Appendix.

charge receive compensation from the date of disembarkation, and if they land between November 1st and March 31st one additional jersey and one pair of woollen drawers.

Units proceeding to India and having one suit of serviceable drab serge or khaki drill clothing in wear should not receive any additional issues. Helmets are taken, except where it is known that sea service helmets are provided on board ship for use on the voyage.

Units proceeding to colonial stations are completed on arrival to the regular scale. In the case of units not returning home, the baggage left behind on embarkation for active service is either forwarded or disposed of as the men desire.

The personal clothing of reservists discharged or retransferred to the Reserve is disposed of for their advantage, and a suit of plain clothes, or 13s. 6d., given to them.

Imperial Yeomanry, Volunteers, and Colonial Troops.

These troops on discharge retain their personal clothing and necessaries, but return to store any greatcoats or cloaks of the pattern worn by Regulars that may have been issued to them from public store. Any men not for immediate discharge on arrival home are completed to the "undress" scale of clothing and a complete kit of necessaries. Yeomen and Volunteers also receive on discharge a suit of plain clothes or 13s. 6d.

Colonial troops discharged in the United Kingdom receive in addition a civilian great-coat for wear during the voyage home. If sent direct from South Africa they will receive an allowance of 25s. for plain clothes, and should have at least the following articles of uniform in their possession:—One pair of boots, a frock, a pair of trousers, a greatcoat, headdress, jersey, two shirts, two pairs of socks, and two pairs of drawers.

Compensation for articles of clothing and necessaries lost by men during active service will not be admitted, as such losses are at once replaceable by issues in kind.

INVALIDS.

All invalids discharged as medically unfit for further service receive—

A pair of boots or shoes.
A suit of plain clothes.
A civilian great coat (if discharged between October 1st and March 31st).
A pair of woollen drawers.
A jersey.
Two flannel shirts.
Two pairs of socks.

Shoemakers' tool chests when no longer required on active service will be returned to the ordnance store abroad, or to the Royal Army Clothing Department at home, or they and any material on hand can be purchased by the regimental shoemaker.

Mobilisation equipment not required for

home service is returned to store by the unit on arrival at home. Personal equipment accompanies men on transfer.

Regimental supplies are returned to the Army Service Corps prior to embarkation from South Africa.

Medical and veterinary stores are returned in South Africa to such base or advanced depôts as the general officer commanding the field force may direct.

Special Instructions for Units of Regulars not Existing as Such in Peace.

They will be demobilised as follows—

(1) If belonging to the Royal Artillery, at home.

(2) If Mounted Infantry, as directed by the general officer commanding the field force.

(3) Others, in South Africa.

Officers who have been seconded and men who have been transferred in consequence of mobilisation return to their peace unit, if it is serving in South Africa, or, in the case of Infantry, to the linked battalion, if it is there. Other personnel, unless otherwise ordered, return home. On arrival at home, Army Service Corps companies proceed to stations as ordered. The personnel (except officers) of bearer companies, and of field, general, and stationary hospitals, Royal Army Medical Corps, on arrival home, proceed to the stations at which mobilisation took place.

Officers on arrival home report themselves *in writing* as follows—

(1) Army Service Corps	To the Quartermaster General.
(2) Army Pay Department... ...	To the Quartermaster General.
(3) Army Ordnance Department ...	Director General of Ordnance.
(4) Royal Army Medical Corps (report in person)...	Director General, Army Medical Service.
(5) Army Veterinary Department	Director General, Army Veterinary Department.
(6) All other officers	To the Adjutant General.

Warrant officers, non-commissioned officers, and men are transferred to the mobilisation depôt of their unit as far as possible in parties under an officer.

Civil surgeons and sisters of the Army Nursing Service report themselves in writing to the Director General, Army Medical Service.

Imperial Yeomanry and Volunteer units, etc., specially formed for the duration of the war or for one year, are given the option of—

(1) Taking their discharge at once in South Africa or on return home.

(2) Completing their year's service at home.

In the latter case they may take thirty

days' pay and allowances and go at once instead of staying on for the year, provided they have been offered their discharge and have accepted it. A similar gratuity is granted to those discharged as medically unfit, or who have served over twelve months. Those who elect to complete their year's service are posted as follows—

Imperial Yeomanry, Provisional Battalion, Shorncliffe.

Volunteer Artillery, 24th Brigade Division R.F.A.

Volunteer Engineers, Depôt Companies, Chatham.

Volunteer Companies, Depôt of Territorial Regiment.

Volunteer Medical Staff Corps and Bearer Companies, Depôt Royal Army Medical Corps, Aldershot.

The arms and any cloaks or greatcoats supplied from public store are returned to store by the Imperial Yeomen. All other clothing and necessaries are retained by the men. Accoutrements and saddlery of Army pattern and camp equipment are returned to store in South Africa.

Arms, accoutrements, and greatcoats of Volunteers discharged at home are returned to their own Volunteer corps, except any greatcoats or accoutrements issued from public store. All other clothing and necessaries are retained by Volunteers, and all other stores returned to store in South Africa.

Militia Reservists.

Mobilised Militia reservists returning from South Africa are considered as reposted to the Militia as militiamen from the date of their arrival at home, and their permanent service thereupon terminates. Any man transferred on mobilisation is reposted to his present or original corps, as he may elect.

Militia reservists revert to the Militia in the rank they formerly held in the Militia or are holding in the Army, whichever is the higher, but if while serving as a private in the Army a Militia reservist received a punishment which would have involved reduction to a lower rank had he been a non-commissioned officer (*e.g.* imprisonment), his rank in the Militia is reduced accordingly.

Stock-taking officers or boards (officers of the Army Ordnance Department being employed if available) are appointed in South Africa to visit every unit or depôt in charge of stores or clothing, and to count personally the whole of the articles in possession and enter them in a ledger.

CHAPTER XXX.

WEAPONS USED IN SOUTH AFRICA, 1899–1901.

SUCH a great amount of criticism has been levelled at the way in which our guns compare with those of other nations, that a short account of the weapons used by our troops in the South African campaign may be interesting. It will be seen that the ranges are very considerable. There may be commanding positions from which a very extensive view can be obtained, and there may be occasional large tracts of open country, but extreme ranges are always attended with the great drawback of difficulty in estimating the effect of the fire.

The guns used in the field in South Africa were the 12-pounder and 15-pounder field guns, the 5-in. and 6-in. howitzers, and the 12-pounder quick-firing, the 4·7-in. and 5-in. guns.

The 12-pounder breechloading gun of 6 cwt. was the gun used by the Royal Horse Artillery.

The 15-pounder breechloading gun and the 5-in. breechloading howitzer by the Field Artillery.

The other guns were used by the Navy or Garrison Artillery.

The ·303-in. Maxim machine gun was used by all arms, and later in the campaign the Vickers-Maxim gun (pom-pom) was used by the Royal Artillery.

6-IN. BREECHLOADING HOWITZER.

Gun.—Material, steel; length, 94 in.; weight of gun, 28 cwt. 3 qr. 5 lb. (30 cwt.); calibre, 6 in. Fitted with special travelling carriage.

Ammunition.—Cartridge, 1 lb. 12 oz. cordite. Projectiles: common steel shell, 118 lb. 8 oz.; common lyddite shell, 122 lb. 9 oz.; star shell.

Range.—5,000 yd.; elevation, 50° 46′; time of flight, 36·19 seconds; 50 per cent. of rounds should fall within an area of 40 yd. × 18·7 yd. × 75 yd.

4·7 IN. QUICK-FIRING GUN (BREECHLOADING).

Gun.—Material, steel (wire construction); weight, 42 cwt.; length, 194·1 in.; calibre, 4·724 in. Fitted with special travelling carriage.

Ammunition.—Cartridge, 5 lb. 7 oz. cordite. Projectiles: common shell, 45 lb.; armour piercing shell, 45 lb.

Range.—Maximum, 10,000 yd.; elevation, 21° 10′; time of flight, 30·7 seconds.

5-IN. BREECHLOADING GUN (MARK II.).

Gun.—Material, steel; weight of gun, 38 cwt.; weight with carriage and limber, 4 tons; length, 137 in.; calibre, 5 in.

Ammunition.—Cartridge, 4 lb. 7¼ oz. cordite. Projectiles: common shell, 50 lb.; shrapnel shell, 50 lb.; case shot, 50 lb.; palliser shot, 50 lb.

Range.—Maximum, 8,700 yd. At 5,000 yd. the elevation is 7° 55′, the time of flight 13 seconds, and 50 per cent. of the rounds

should fall within an area of 36 yd. × 2·8 yd. × 8 yd.

5-IN. BREECHLOADING HOWITZER.

Gun.—Material, steel; weight of gun, 9 cwt. 2 qr. 13 lb.; weight with limber complete, 46 cwt. 2 qr. 8 lb.; length, 49 in.; calibre, 5 in.

Ammunition.—Cartridge, $11\frac{7}{16}$ oz. cordite. Projectiles: common shell, 50 lb.; common lyddite shell, 50 lb. 10 oz.; shrapnel shell, 50 lb.; star shell, 30 lb. 11 oz.; case shot, 50 lb.

Range.—Maximum, 4,900 yd.; elevation, 42° 24′; time of flight, 31·08 seconds; 50 per cent. of rounds should fall within an area of 49·1 yd. × 8·98 yd.

15-POUNDER BREECHLOADING GUN.

Gun.—Material, steel; length, 89·05 in.; weight of gun, 7 cwt.; weight with limber complete, 36 cwt.; calibre, 3 in.

Ammunition.—Cartridge, $15\frac{3}{4}$ oz. cordite. Projectiles: shrapnel shell, 14 lb. 13 oz.; case shot, 13 lb. 4 oz.

Range.—Maximum, 6,000 yd.; elevation, 17° 38′; time of flight, 22·02 seconds; 50 per cent. of rounds should fall in an area of 70·8 yd. × 5·04 yd. × 29·7 yd.

12-POUNDER BREECHLOADING 6 CWT. GUN.

Gun.—Material, steel (wire construction); weight of gun, 6 cwt.; weight with limber complete, 32 cwt. 3 qr. 20 lb.; length, 71·05 in.; calibre, 3·2 in.

Ammunition.—Cartridge, $12\frac{7}{16}$ oz. cordite. Projectiles: shrapnel shell, 12 lb. 8 oz.; case shot, 13 lb. 4 oz.

Range.—Maximum, 6,000 yd.; elevation, 18° 24′; time of flight, 22·9 seconds; 50 per cent. of rounds should fall in an area of 147 yd. × 12·65 yd. × 58·8 yd.

12-POUNDER QUICK-FIRING GUN OF 12 CWT. (BREECHLOADING).

Gun.—Material, steel; weight of gun, 12 cwt.; length, 123·6 in.; calibre, 3 in. Fitted with special travelling carriage.

Ammunition.—Cartridge, 1 lb. 15 oz. cordite. Projectiles: common shell, 12 lb. 8 oz.; armour piercing shell, 12 lb. 8 oz.

Range.—Maximum, 8,000 yd.; elevation, 19° 24′; time of flight, 26·6 seconds. An armour piercing shell will perforate a 5 in. steel plate at 136 yd.

0·303-IN. MAXIM MACHINE GUN.

As the number of machine guns is to be increased, it may be as well to enter rather fully into their description. The Vickers-Maxim (pom pom) is made on the same principle, only with a larger calibre and firing a small shell.

Weight of gun, 60 lb.

This gun, which uses the same ammunition as the soldier's rifle, is divided into two portions, the non-recoiling and the recoiling. It is worked automatically by two forces, the explosion of the charge, which forces the recoiling portion backwards, and a strong spring, which carries

it forwards. The non-recoiling portion consists of the barrel casing and breech casing. The barrel casing is of gun metal, holding about seven pints of water to keep the barrel cool while firing. There is an opening connected with the steam tube to let steam, but not water, escape. There are two other openings, which are kept tightly closed except when in use, for filling with water and drawing it off. Under the barrel casing is the ejector tube, through which the empty cartridge cases are ejected from the gun. When the barrel casing is filled with water about 2,000 rounds may be discharged at short intervals without replenishing, deliberate firing being 70 rounds, and rapid fire 450 rounds per minute. The water begins to boil when the gun has fired with its greatest rapidity 600 rounds; after this, if the firing is continued, the amount of water evaporated is about one and a half pints for each 1,000 rounds. There is an automatic safety catch so arranged that unless it is held up the firing lever cannot be pressed forward. On the upper surface of the breech casing is the tangent sight, graduated up to 2,500 yd.

The recoiling portion (which is mounted inside the non-recoiling portion) consists of the barrel and two side plates, which carry the lock and crank. On the left of the breech casing there is a strong spiral spring, called the fusee spring, the rear end of which is connected by the fusee chain and fusee with the crank; the fore end is attached to the

breech casing. The action of the recoil extends the fusee spring and winds the chain which is attached to it about the fusee, so that the fusee spring is not only extended about one inch by the recoil of the barrel, but the winding of the chain on the fusee causes a still further extension. As soon as the recoil is exhausted the action of the fusee spring is to pull the recoiling portion into the firing position and to unwind the chain off the fusee, thereby causing the crank handle to fly back and strike the check lever. The gun is supplied with cartridges from a belt which passes through the feed block on the top of the gun from right to left. This belt is formed by two pieces of webbing connected together by eyelets and brass strips. An arrangement is made so that the cartridges may be kept parallel in passing through the feed block, and lie even in the ammunition belt boxes.

When the gun is fired the explosion causes the recoiling portion to run backwards about one inch; the greatest portion of the energy of the recoil is transferred to the crank. When the lock runs backwards the extractor withdraws the empty case from the barrel and a fresh cartridge from the belt in the feed block. When the force of recoil is expended the action of the fusee spring comes into play, carrying the recoiling portion forward, and relieving the crank by the unwinding of the fusee chain, thereby forcing the lock to the front. As the recoiling portion travels forward

it brings up automatically a fresh cartridge into position in the feed block; as the lock moves forward the live cartridge is placed in the barrel chamber and the empty case in the ejector tube. By pressing the double button the firing pin explodes the cartridge. There is also a mechanism by which the gun can be "set" for rapid fire.

This gun can be carried, when necessary, on a pack saddle, the total weight of the gun and tripod with pack saddle complete being 224 lb. 8 oz. (2 cwt.); the ammunition saddle with pack saddle complete, 256 lb. (2¼ cwt.).

The Infantry machine gun complete, with 4,000 rounds, fitted for draught, weighs behind the traces 10 cwt. 2 qr. 4 lb.

The rifle used was the

LEE-METFORD RIFLE.

Weight—Mark I.	9 lb. 10 oz.
Mark II. (now being issued to replace Mark I.)	9 lb. 4 oz.
Weight of sword bayonet	15 oz.
Length of rifle	4 ft. 1·85 in.
Length of rifle with bayonet	5 ft. 1·45 in.
Length of rifle barrel ...	30·197 in
Calibre	·303 in.
Muzzle velocity (with cordite)	2,000 ft.-sec.
Number of grooves ..	7
Depth of grooves	·004 in.
Width of grooves	·023 in.

The above system of rifling is superseded by what is termed the Enfield system—the rifle being termed the Lee-Enfield—

Number of grooves	...	5
Depth of grooves ...	...	·005 in.
Width of grooves ...	...	·0936 in.

The rifle is a bolt system gun, the breech being closed by a bolt worked backwards and forwards in the body by a lever on the right side of its rear end. The bolt is secured when home by turning down the lever. The bolt contains the mainspring and striker. There are two gas escapes in the body, one on either side of the breech to facilitate a lateral escape of gas in case of a burst cartridge; there is a third one at the bolt head, in case of a blow back from a defective cap.

The magazine in Mark I. holds eight cartridges in a zigzag column, Mark II. ten cartridges in two columns, side by side.

To prevent the cartridges rising in the magazine, and to enable the rifle to be used as a single loader, a cut-off is provided, consisting of a flat piece of steel with a thumb-piece by means of which it can be pressed in or pulled out.

The back sight is graduated up to 1,800 yards, but the rifle is also provided with extreme range sights on the left side for ranges from 1,600 to 2,900 yards (Mark II., 2,000 yards); 3,500 yards may be taken as the extreme range of the bullet; at this distance the effect of the wind is very great.

Lee-Metford Carbine used by Cavalry.

Weight	7 lb. 7 oz.
Length	3 ft. 4 in.
Length of barrel	20¾ in.

Calibre, rifling, etc., same as rifle.

The magazine holds six cartridges only, and the sight is marked from 600 to 2,000 yards.

Ammunition for Rifle and Carbine.

Charge.—Thirty grains of cordite.

Bullet.—A compound of 98 per cent. lead and 2 per cent. antimony, with an envelope of 80 per cent. copper and 20 per cent. nickel, weighing 215 grains.

One packet of ten rounds weighs 9⅝ oz.

Revolver (Service).

Length of barrel	4 in.
Length of revolver ...	10¼ in.
Calibre	·441 in.
Number of grooves ...	7
Weight of bullet	265 grains.
Charge of powder	18 grains.
Muzzle velocity	715 ft.-sec.
Weight of revolver ...	2 lb. 3 oz.
Weight of packet of 12 cartridges	10 1/16 oz.

The revolver is sighted to shoot accurately at 50 yards, but the extreme range of the bullet is 1,576 yards (35° elevation).

The cylinder is chambered to hold six cartridges.

CHAPTER XXXI.

WAR OFFICE ORGANISATION.

THIS is not a subject into which it is necessary for soldiers to go very deeply; at the same time it is desirable that something should be known about this matter, which has recently been brought so forcibly before the public.

A committee composed of civilian members of Parliament and military officers has recently presented a very comprehensive report on War Office reform. The committee had the advantage of examining general officers of long service experience both at the headquarters staff and in different commands at home and abroad, civilians long connected with the administration of financial branches of the War Department, and of obtaining information from railway and private companies.

The committee was not called upon to suggest any drastic changes in the constitution of the War Office, or to go beyond the distribution of responsibility as laid down by the Order in Council of March 7th, 1899.

As regards the internal organisation of the War Office, the committee reported: "Definitions of the duties of departments have been wavering and uncertain . . . There is a disposition on the part of energetic heads of departments to draw power to themselves, and to enlarge the area of their activities beyond

all reason and expediency. Great confusion is thereby introduced, and individual responsibility cannot be assigned." The evil effects of this upon the service generally is stated later on in the words: "The complexity of regulations is now so great that their interpretation alone leads to a mass of useless correspondence. This state of affairs constitutes a grave detriment to the public service. The practice of making endless references to obtain authority, and reluctance to take direct action, are inevitable consequences." This mass of mere routine work becomes so great that the whole time of the War Office officials is taken up in dealing with it, and even then there is considerable delay. The committee further reported on the extra and in many cases quite unnecessary work thrown upon the War Office by the increasing number of questions put by members of Parliament about the Army. "In the year 1900, when the War Office was confronted with an enormous pressure of important work, no fewer than 1,379 questions on matters affecting the Army were asked in Parliament, or an average of sixty-six for each week of the session, while on several days the numbers varied between twenty and fifty. Although these questions are frequently of a trivial character, and are in many cases asked without any verification of the supposed facts on which they are founded, the labour and correspondence involved is very considerable." The Decentralisation Committee of 1898 re-

ported, "The imposition of increased financial responsibility on general officers should be accompanied by more complete association and union between the military and the civil departments at the War Office." The present committee remarked that very little had been done towards giving practical effect to this most important recommendation.

As regards external financial control, the committee made various recommendations—among others, one that "the moneys voted on Army estimates for works and buildings should be classified as follows: Part I., new works under £5,000; Part II., repairs, renewals, and maintenance. These services should not be detailed, and no reference to the Treasury should be required so long as the total amount allotted to the various districts is not exceeded. The War Office should have authority, and should delegate authority to general officers commanding districts to transfer savings from Part I. to Part II."

As regards internal financial control, the committee recognised under the present system the extreme multiplication of regulations with minute checks that were placed upon officers holding high appointments as being the result of the present system of examination and audit at the War Office; they therefore recommended that the work of examination and audit should be transferred from the War Office to the headquarters of military districts, not only in respect of payments made by paymasters,

but also in respect of all stores, supply, and clothing accounts now rendered direct to the War Office. The report says: "It was brought to the committee's knowledge that during the present war the want of representation of the Accountant-General's Department in South Africa has been felt. Such demands would be much more easily met in future if local sections of the Accountant-General's Department, accustomed to act independently and with a trained staff, were in existence, and could at once respond to any call." It will be useful here to recall the duties of the controller of military accounts who is attached to the staff of each lieutenant-general commanding in India.

As regards the clerical establishment, the committee recommended that officers and soldiers might be employed instead of some of the present civilian clerks.

As to the responsibilities of general officers commanding, the committee's views were: "The result to be arrived at is to make the general officer commanding responsible for the general efficiency of his command, and this efficiency should be watched and tested from the War Office by thorough and systematic inspection. This view of the position to be assigned to general officers commanding is not novel. It was laid down clearly and with much emphasis in the report of the Decentralisation Committee of 1898. That report formulated two important principles as follows, viz.: The general officer should have real control within his district,

subject to general regulations and the audit of his accounts. . . . The control of the War Office over the districts should be secured by constant inspection, whether in questions of military training, of the execution of works, of stores, or of accounts. It is by inspections, and not by returns and reports, that a general officer's administration of his command can best be judged."

As to general control and direction, the report says: "There can be no general control and direction of these great groups of business unless the relations between the departments dealing with them are placed on a satisfactory and durable basis. The work of the great departments at present constantly overlaps, and it is impossible to trace any systematic co-ordination between them, except, perhaps, that intended to be provided by the theoretical supervision of the Commander-in-Chief, who is overweighted with other duties more properly appertaining to him, or by the somewhat fitful action of the Army Board." As regards the present organisation of the War Office Council and the Army Board the committee report: "The committee are satisfied that, under the existing Parliamentary conditions which determine the principles upon which the British Army is raised, maintained, equipped, and financially controlled, there must be both a military and a civilian element at the War Office. The efficiency of the service can only be secured by blending these two elements into

one body for superior administrative purposes. For this purpose a permanent Board should be established to supersede the War Office Council and Army Board, consisting of the heads of all the great departments, military and civil, to be known as 'the War Office Board.' The Board, while in no way impairing the authority and powers of the Secretary of State or of the Commander-in-Chief, should secure the harmonious working of all the great departments, military and civil. The Secretary of State should be president of the Board, and would attend and preside when he thought fit. The Commander-in-Chief, who is the chairman of the existing Army Board, should, in the absence of the Secretary of State, be the chairman whenever important questions demand his attendance, and would, with the military heads of departments, represent the Army; the permanent Under-Secretary of State should be deputy-chairman, providing for the continuity of the business of the Board, and representing, with the Parliamentary Under-Secretary, the Financial Secretary, and the Accountant-General, the civil element of the War Office. Thus the deliberations of the Board would have the advantage of expert knowledge on every subject, whether from the military or civil side." The duties of the War Office Board would be as follows:—

(1) The Board should be charged (under the Secretary of State) with the supervision and control of the working and

management of the War Office, with the consideration of the annual estimates prepared by the heads of departments, and with the allocation of the sums allotted for military purposes.

(2) The members of the Board should be empowered to bring before it any important question affecting their departments, and the Board as a whole should consider and decide any proposal submitted to it, subject to the approval of the Secretary of State. The assistance of general officers commanding should be called in when required.

(3) The Board should not attempt to deal with matters of routine or minor questions. It would appoint committees, not only of its own members, but of other officials, heads of departments or branches, or even officers outside the War Office, and would delegate to them the consideration of any proposal or the arrangements for carrying out any decision.

(4) The financial criticism of any proposal before the Board would be considered *pari passu* with the proposal itself, so that the whole subject would leave the Board for the Secretary of State's decision in a complete state.

(5) The recommendations of the Board

should be directly submitted to the Secretary of State by the chairman or by the deputy-chairman. A complete record of the proceedings and decisions of the Board should be kept for the information of the Secretary of State, and any dissents should be recorded.

The permanent Under-Secretary to be responsible for calling the Board meetings regularly, and for seeing that its decisions were carried out; also that all sub-committees performed their duties regularly.

Speaking generally, the committee's recommendations are—

To abolish or simplify the present numerous regulations on small matters of detail, including company pay lists, and by attaching branches of the Accountant-General's Department to military districts to give financial assistance and advice, and to conduct local examinations and audits of accounts.

To increase the financial power and the administrative staff of general officers commanding, and thereby to reduce references to the Treasury.

To replace part of the civilian clerks at the War Office by officers and soldiers.

To relieve the War Office of a mass of routine work by decentralisation, and

to establish a War Office Board on a permanent basis to control and supervise the business of the War Office, without detracting from the responsibilities of the Commander-in-Chief and of the military heads of departments.

APPENDIX.

ARMY RESERVE.

By the Reserve Forces Act of 1882 the Army Reserve was divided into two classes. Class I. to be composed of men who had done part of their term of service in the ranks; Class II. to be composed of pensioners and specially enlisted old soldiers—this class is practically non-existent.

Class I. is subdivided into four *sections*—A, B, C, and D.

Section A is composed of men who are of good character and join this section within the first six months of their transfer to the Reserve. The total strength of this section is limited to 5,000. The conditions of service are:—

(1) Liability to be called out on Army service *without Proclamation* during the first twelve months' service in the Army Reserve.

(2) During the period of service in Section A a reservist will not be liable to be called out on Army service unless he is required for service *outside* the United Kingdom, when warlike operations are in preparation or in progress, or unless any portion of the Reserve is on permanent service.

(3) If called out for Army service, he will not be liable to serve for more than twelve months with the colours from the date of rejoining, unless any portion of the Reserve is *on* permanent service.

(4) The engagement to join Section A may be revoked by the reservist giving three months' notice in writing to his commanding officer, provided he be not required for service during such three months.

The rate of pay for Section A is 1s. a day, issuable monthly in arrear.

Section B is composed of men who have completed the period of Army service (under twelve years) for which they originally enlisted.

Section C is composed of men part of whose term of Army service has been converted into service in the Reserve.

These two sections contain practically the same men, except that in Section C will be found certain Engineer reserves engaged in railways, post-offices, and as electricians, who are passed at once on enlistment into the Reserve.

Section D is composed of men who have completed twelve years' service, either with the colours or partly with the colours and partly in the Reserve. As men in Section D are not serving on Army attestations, they are enlisted for a fresh period of service for four years.

Men of Sections B, C, and D are liable to be called out by Proclamation for permanent service, or without Proclamation for annual training or in aid of the Civil Power. Section D is not called up until after Sections B and C.

The rate of pay for Sections B and C is 6d. a day, and for Section D 6d., provided the man comes under the provisions of the Reserve

Forces Act of 1900; if enrolled before that date, 4d. a day.

When called out for military duty, a man of the Army Reserve receives pay at Army rates, and if called out in aid of the Civil Power 6d. a day additional.

When called up for drill he receives 4d. per day in addition to his Reserve pay. If belonging to the submarine mining section of the Royal Engineers, the Army pay of his rank.

If injured while in the performance of military duty, a man of the Army Reserve may be granted a gratuity not exceeding 3s. 6d. a day for a period not exceeding six months.

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